PB85-180438

National Small Quantity Hazardous Waste Generator Survey

Abt Associates, Inc., Cambridge, MA

Prepared for

Environmental Protection Agency, Washington, DC

Feb 85

U.S. Department of Commerce
National Technical Information Service
NTIS

50272-101

REPORT DOCUMENTATION PAGE

1. REPORT NO.

2.

3. Recipient's Accession No.
PB85 180438 /AS

4. Title and Subtitle
National Small Quantity Hazardous Waste Generator Survey

5. Report Date
February 1985 (prepared)

6.

7. Author(s)
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8. Performing Organization Rept. No.

9. Performing Organization Name and Address

Abt Associates Inc.
55 Wheeler Street
Cambridge, MA 02138

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.
(C) 68-01-6892
(G)

12. Sponsoring Organization Name and Address
Environmental Protection Agency
Office of Solid Waste
401 M Street, S.W.
Washington, DC 20460

13. Type of Report & Period Covered
Final Report
1/1983 - 10/1984

14.

15. Supplementary Notes
released to public March 12, 1985

16. Abstract (Limit: 200 words)

This report summarizes the results of a two-year, nationwide survey of small quantity generators of hazardous waste (i.e. establishments that produce less than 1,000 kilograms of hazardous waste per calendar month.) The report includes general information on: the number and types of small quantity generators; the types and quantities of waste they generate; and the ways in which the wastes are handled. The report also contains waste characterization and management profiles of 22 principal industries containing small quantity generators.

17. Document Analysis a. Descriptors

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement:
distribution unlimited

19. Security Class (This Report)

20. Security Class (This Page)

21. No. of Pages
170

22. Price

(See ANSI-Z39.18)

See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

✓

NATIONAL SMALL QUANTITY HAZARDOUS WASTE GENERATOR SURVEY

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U.S. ENVIRONMENTAL PROTECTION AGENCY
1985

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-FINAL REPORT-

February, 1985

Prepared for:

Environmental Protection Agency
Office of Solid Waste
401 M Street, S.W.
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(under Contract # 68-01-6892)

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REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

ACKNOWLEDGEMENTS

The authors would like to acknowledge the staff at both EPA and Abt Associates who have made significant contributions to this study. In particular, Barry Stoll and Chris Hill of the Financial Responsibility and Assessment Branch of the Office of Solid Waste's Characterization and Assessment Division provided guidance and reviewed drafts of this report. Substantial contributions to the study design were made by Matthew Straus, Jacqueline Sales and Alan Corson also of the EPA's Office of Solid Waste. The principal members of the study team are listed below, however, there were many others who made important contributions over shorter periods of time.

The authors would also like to thank Liz Gold and Joyce Stamps for their long hours spent in producing this report.

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1.0 INTRODUCTION

This report summarizes the results of a national survey of generators of hazardous waste who produce less than 1,000 kg of hazardous waste per month. The survey was commissioned by the Environmental Protection Agency's Office of Solid Waste, and conducted by Abt Associates Inc., between January, 1983 and October, 1984. Approximately 50,000 establishments that were considered potential small quantity generators were surveyed, resulting in a data base containing nearly 19,000 responses. The survey was designed to obtain reliable estimates of the number and type of small quantity hazardous waste generators and their waste generation and management practices. As with any voluntary survey there is a potential for inaccuracies in the results due to errors and misrepresentations by the respondents. The reasons for such discrepancies are numerous, including lack of knowledge of hazardous waste management issues and general skepticism toward federal agencies, and should be taken into consideration by the reader when reviewing the results presented herein.

Throughout this report, the term "small quantity generators" refers to those establishments generating less than 1,000 kg of hazardous waste per month. Most of these establishments are currently excluded from regulation under Subtitle C of the Resource Conservation and Recovery Act (RCRA) by regulations promulgated on May 19, 1980. Amendments to RCRA signed into law on November 8, 1984, however, require EPA to lower the exclusion level to 100 kg per month and to develop new management standards for this new category of generators. For clarity, the newly-regulated establishments generating between 100 kg and 1,000 kg per month will be referred to as "SQGs" hereafter. Very small quantity generators producing less than 100 kg per month of hazardous waste will remain excluded from regulations under Subtitle C. These establishments will be referred to as "VSQGs" throughout this report.

The following are some of the major findings of the survey, which are described in greater detail in Section 4.

Profile of Generators and Waste Streams

- Overall, there are an estimated 600-660 thousand small quantity generators of hazardous waste in the nation. These establishments generate about 940 thousand metric tons of hazardous waste annually and represent

98 percent of the total number of hazardous waste generators nationally but less than one half of one percent of the total quantity of hazardous waste generated annually.

- Among small quantity generators, VSQGs, which remain excluded from hazardous waste regulations, represent three quarters of the generators but only 20 percent of the waste.

- In general, small quantity generators tend to be located near major population centers. Seventy percent of the small quantity generators are located in Metropolitan Statistical Areas.

- Nearly 85 percent of the small quantity generators are in non-manufacturing industries. Fifty percent of the small quantity generators are in vehicle maintenance and 10 percent are in construction. Among manufacturing industries the dominant component is metal manufacturing which accounts for 10 percent of the generators.

- Sixty percent of the waste generated by small quantity generators is lead-acid batteries (90 percent of which are recycled). Additionally, 20 percent of the waste consists of solvents, and 5 percent is strongly acidic or alkaline wastes. The distribution of wastes generated is fairly consistent among SQGs and VSQGs.

Management Practices

- Seventy percent of the small quantity generators, accounting for over 80 percent of the waste, ship their waste off-site. Off-site management is dominated by recycling (largely of lead-acid batteries): two thirds of the small quantity generators who ship their waste off-site send it to recycling facilities. An estimated 5 percent of the generators who ship their waste send it to Subtitle C hazardous waste facilities, and the remainder, which do not recycle, send their waste to solid waste facilities (i.e., sanitary landfills or incinerators) or do not know the ultimate destination of their waste. About one third of the generators provide written notification of the nature of their waste to transporters, with about 6 percent using EPA manifests.

- Approximately 20 percent of the small quantity generators manage their waste on-site, and 10 percent both manage their waste on-site and ship it to an off-site facility (i.e., on-site treatment followed by off-site disposal). On-site management is dominated by RCRA exempt disposal to public sewers, which is practiced by about 45 percent of these generators. Only about a quarter of the small quantity generators managing waste on-site recycle their wastes, as compared to two thirds of those shipping their waste off-site. About 20 percent of the small quantity generators practicing on-site management treat their waste.

- Roughly 10 percent of all small quantity generators currently store their waste for more than 180 days prior to disposal while approximately 20 percent store their waste 90-180 days.

The sections that follow provide greater detail concerning the conduct and results of the survey. Section 2 describes the purpose and scope of the survey and provides background on RCRA and the 1984 amendments. Section 3 presents the methodology of the survey, including the sample design, questionnaire design, survey implementation, and statistical reliability of the survey results. Section 4 presents the overall results of the survey. Appendix A contains a detailed description of the sample frame, Appendix B is a sample questionnaire, Appendix C contains a description of the formula used to calculate the reliability of estimates based on the survey data, and Appendices D and E contain detailed industry and waste stream profiles for small quantity generators.

2.0 PURPOSE AND SCOPE

2.1 Background

On May 19, 1980 EPA promulgated regulations pursuant to the Resource Conservation and Recovery Act (RCRA) which, among other things, delineate responsibilities for hazardous waste generators, transporters, and treatment, storage and disposal facilities. These regulations also establish a conditional exclusion from full regulation for hazardous waste from generators who produce less than 1,000 kg in a calendar month. The decision to establish such an exclusion level was not based on a detailed evaluation of the associated risks, but rather on the recognition of a lack of sufficient administrative resources to effectively regulate all hazardous waste.

In the preamble to the 1980 regulations EPA argued that, based on available data, the great majority of the generators produce less than 1,000 kg per month yet account for less than one percent of the total hazardous waste generated. The Agency thus determined that instead of sacrificing other elements of the regulatory program, such as permitting and inspection of treatment, storage and disposal facilities, the overall environmental objectives of RCRA would be best served by choosing an exclusion level such that implementation of the full regulatory program would be as effective as possible. Even so, many groups and individuals suggested, and still believe, that the relative hazard of a particular waste is independent of the quantity of waste or number of generators involved and, therefore, that any regulatory decision based on these variables is irrelevant in terms of protection of human health and the environment. It thus became imperative that EPA undertake a study to characterize these small quantity generators and their waste handling methods.

EPA further stated in the preamble to the 1980 rules that it would "initiate rulemaking within 2 to 5 years to expand Subtitle C coverage down to generators of 100 kg/mo." As a result, this survey was commissioned in order to document the waste generation and management practices of small quantity generators that produce less than 1,000 kg per month of hazardous waste.

The specific requirements that currently apply to small quantity generators are found in 40 CFR § 261.5. In order for hazardous waste to be excluded from full regulation under RCRA, a small quantity generator must first determine, as specified in the regulations, that his waste is a hazardous waste. He must then either treat or dispose of his waste, on or off the premises, in a hazardous waste facility which has interim status or is permitted by EPA or an authorized state, or is a facility approved by a state to manage municipal or industrial solid waste. The waste also may be handled at a facility which reuses or recycles the waste or one that treats it prior to such reuse or recycling. If, however, a generator accumulates at any time a quantity greater than 1,000 kg of hazardous waste, or 1 kg of acutely hazardous waste, all such waste becomes subject to the full RCRA Subtitle C regulations.[1]

In the 1984 amendments to RCRA, Congress added specific provisions that pertain directly to small quantity generators and that will result in changes to the current regulations. Most importantly, EPA is required to establish a new exclusion level of 100 kg per month, thereby creating a subclass of generators (SQGs) producing between 100 kg and 1,000 kg of hazardous waste per month who will be subject to new requirements. The Agency has until March 31, 1986 to promulgate these new management standards.

At a minimum, the new standards will require that all treatment, storage and disposal of SQG hazardous waste occur at an interim status or permitted hazardous waste facility. By August 1985, SQGs will be required to use an abbreviated Uniform Hazardous Waste Manifest when they ship waste off the premises, although such waste will remain subject to existing § 261.5 standards until new requirements are promulgated. Additionally, an SQG may store hazardous waste for up to 180 days without being required to obtain a permit (large quantity generators may only store for 90 days before being required to obtain a permit).

Should EPA fail to promulgate new standards by the March 31, 1986 deadline, SQG hazardous waste will become subject to the minimum requirements described in the above paragraph. Furthermore, an SQG will be required to retain a copy of the manifest, signed by the facility which receives the waste, for three years, and to file manifest exception reports.

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[1] The exclusion level for acutely hazardous waste is 1 kg per month, and for residues or contaminated soil, water, or other debris from the cleanup of a spill of a commercial chemical product listed in 40 CFR § 261.33(e), the exclusion level is 100 kg per month.

Any further requirements for SQGs, regardless of whether or not the deadline is met, may vary from existing large quantity generator standards but must be protective of human health and the environment. EPA is given discretion as to whether new requirements are necessary for waste produced by VSQGs.

Given these forthcoming changes in the regulatory framework, there is a great need for information concerning small quantity generators. Specifically there is a need for information that will allow EPA to weigh the economic and environmental implications of the available regulatory options. To date, there has been little available information for this population. This survey was conducted to reduce the uncertainty associated with the development of a new regulatory framework.

2.2 Survey Objectives and Approach

The major objectives of the small quantity generator survey were to develop reliable estimates of the types and numbers of small quantity generators, the types and quantities of hazardous waste generated by these establishments, and the methods by which those wastes are managed. To this end, the most feasible approach was:

- To obtain a profile of small quantity generators in industries that were considered most likely to contribute to hazardous waste generation (primary industries);
- To identify the waste management practices used by small quantity generators in the primary industries; and
- To develop a general profile of small quantity generators in other industries that were considered to be less likely to include a significant proportion of small quantity generators.

As described below, these three steps provided the framework for the design and conduct of the survey.

Obtain a Profile of Small Quantity Generators in Primary Industries. Industries of primary concern were identified through a review of United States industries according to their Standard Industrial Classification (SIC) codes. This review included analysis of past studies, consultation with trade associations and industrial experts, and professional judgement. The procedure used in the review is more fully described in Section 3. As a result of these efforts, 125 SIC codes, which were combined into 22 industry groups, were identified as industries of primary concern. These SIC codes, shown in Appendix A, Table 1, became the focus of the survey.

As shown in Appendix A, Table 2 the survey targeted specific wastes for each primary industry. Establishments in each industry category were sent survey questionnaires pertaining to the specific, targeted wastes that they were expected to generate in order to obtain an overall profile of the types and quantities of wastes generated by small quantity generators. The questionnaire asked for the average, maximum, and minimum quantities of each targeted waste stream generated by each establishment. The survey questionnaire also contained a question asking respondents to identify further non-targeted wastes that might be generated by the establishment. Although this question did not address waste quantity or management practices, it did allow for the respondent to provide useful information regarding the generation of additional waste streams.

Identify Waste Management Practices for Small Quantity Generators in the Primary Industries. The second element of the survey approach was to identify the waste management practices utilized by establishments in the primary industries. To accomplish this objective, the survey questionnaire contained questions concerning waste storage, transportation, treatment, recycling and disposal practices for each targeted waste. Since the waste handling practices for a particular establishment could differ by waste stream, it was important that the survey questionnaire permit respondents to answer for each waste individually. Thus, the establishments surveyed received questionnaires requesting information separately on from one to eight different waste streams. A sample survey questionnaire is included as Appendix B.

An important objective was to design a questionnaire that would be understandable by a general audience. In view of the wide range of types of establishments that were potential small quantity generators, it could not be assumed that the respondents would have the training necessary to complete a technical questionnaire. Consequently, the questionnaire was designed in non-technical terms and was pre-tested on a selection of establishments to ensure that it would be understood.

Develop an Estimate of Small Quantity Generators in Other Non-Surveyed Industries. In addition to the industry categories covered in detail by the survey, it was anticipated that there would be small quantity generators in other non-surveyed industries. A further element of the survey approach was to obtain a general description of small quantity generators in these secondary industries.

Two types of industries were included in this secondary category:

- Industries that were similar in their processes and wastes to specific primary industries and that would be described by analogy to the primary industry (e.g., general building contractors, a secondary industry, is similar to construction, a primary industry).
- Industries that could not be surveyed effectively because they contain incidental generators and highly heterogeneous establishments. Industries in this category were expected to contain too few establishments that are small quantity generators, or establishments that are too diverse in the types of services delivered, wastes produced and waste management practices utilized (e.g., manufacturing services not elsewhere classified) for the industry to be surveyed effectively.

Estimates of the number of generators and waste quantities in the industries that were expected to be similar to the surveyed industries were developed by analogy to the primary industries surveyed. For example, the percentage of establishments that were assumed to be small quantity generators among general building contractors, and their waste quantity, is based on the results obtained from the survey for the construction industry. This approach provides an approximation of the number of small quantity generators and the quantity of wastes generated by establishments in these SIC codes, but it precludes an estimation of waste management practices. The results of this analysis are shown in Appendix A, Table 3.

A different method of estimating the number of small quantity generators was used in analyzing the second category of industries, those containing incidental generators. The first step involved using the Recommendations on Inclusion/Exclusion of Industries by SIC Codes for the Small Quantity Generator Survey (Abt Associates, 1983) to determine which industries might contain some small number of generators. The total number of establishments in industries expected to contain some small quantity generators was estimated at 300 thousand from County Business Patterns (1982) and the Duns Market Identifiers file. Next, a high estimate of 40 percent for the percentage of these establishments that are likely to be small quantity generators was developed on the basis of the secondary industries treated by analogy. A low estimate was developed through analyzing responses from approximately 3,000 surveyed establishments which, upon processing their responses, were determined not to be in any of the primary industries, but rather were in secondary industries containing incidental generators. It was found that 20 percent of these establishments were small quantity generators. Therefore, 20 percent was set as the low estimate for the percentage of small quantity generators among establishments in these industries.

3.0 SURVEY DESIGN AND IMPLEMENTATION

3.1 Introduction

This chapter presents a description of how the survey was designed and carried out. Additionally, the statistical methodology for deriving estimates from the survey data is presented. The information provided here should be sufficient to understand and evaluate the results of the survey. More detailed information is contained in Appendices A, B and C, and Abt Associates' report to EPA's Office of Solid Waste entitled Small Quantity Generator Survey Methodology Report.

EPA chose to conduct the small quantity generator survey on a voluntary basis in order to encourage better cooperation between industry and the Agency. A key concern in designing the survey was to develop a methodology that would yield a high response rate, despite the sensitivity of the topic of hazardous waste. In developing the methodology, EPA worked closely with a coalition of trade associations and public interest groups concerned with the regulation of small quantity generators. Many of the coalition's suggestions were incorporated into both the sample and questionnaire design. Nine trade associations wrote letters endorsing the survey, which were sent to potential respondents along with the questionnaire. A major factor in obtaining industry support was the strict assurance given by EPA of the confidentiality of responses. As evidenced by the final survey response rate of 52.6 percent, the survey design was successful in obtaining a high level of response for this type of population and survey.

3.2 Sample Design

3.2.1 Identification of SIC Codes to be Included in the Survey

The first step in the sample design involved identifying the target population, that is, the types of establishments to be included in the survey. The main objectives in this process were, first, to minimize unnecessary respondent burden by excluding from the survey both those establishments that generate large quantities of hazardous waste (more than 1,000 kg/mo.) and those establishments that do not generate any hazardous waste, and, second, to utilize most effectively the resources available for conducting the survey by focusing on those types of establishments that were most likely to generate small quantities of hazardous waste.

In selecting the target population, a careful review of each Standard Industrial Classification (SIC) category was conducted, and establishments were included only from those categories that were: (1) not statutorily excluded from regulation under the Resource Conservation and Recovery Act (RCRA); (2) expected to generate hazardous waste regulated under RCRA; and (3) expected to contain a significant number of small quantity generators. This review process involved several steps, including use of professional judgment; contact with industry representatives, industrial experts, and professional and trade associations; and examination of trade journals, government studies and documents, and other secondary literature.

Industrial categories were placed into one of three groups as a result of the review process. The first group consisted of those SIC codes that would be included in the survey and, therefore, defined the target population. A second group of SIC codes contained establishments in categories similar to those in surveyed industries. This group was not surveyed. Instead, estimates of the number of small quantity generators and waste types generated were obtained through analysis of secondary sources and through extrapolation of the survey results for similar industries that were surveyed. A third group, which also was not included in the survey, included industrial categories that were thought not likely to contain a significant number of small quantity generators, or categories that contained establishments that were too diverse in the types of services delivered or goods produced to be sampled effectively. The latter were typically industries in the "Not Elsewhere Classified" SIC codes.

Based on the review of SIC codes, 125 SIC codes were chosen for inclusion in the survey, and 22 SIC codes were excluded from the survey because they were similar to those already included in the survey. The remaining SIC codes were excluded from the survey because they were unlikely to contain significant numbers of small quantity generators or were too heterogeneous to be sampled effectively. The SIC codes included in the survey are shown in Appendix A, Table 1 and the process used in selecting these SIC codes is described in a report prepared by Abt Associates for EPA entitled Recommendations for Inclusion/Exclusion of Industries by SIC code for Small Quantity Generator Survey.

3.2.2 Grouping of SIC Codes into Industry Groups

The 125 SIC codes included in the survey were combined into 22 larger industry groups in order to develop a framework for the survey analysis. These groupings were determined primarily according to the types of waste which the establishments in each SIC code were expected to generate, and secondarily according to the services delivered or goods produced by the establishments. For example, establishments in SIC codes 7332, 7333, 7395 and 8411[2] were grouped together because they were expected to produce photographic wastes, solutions or sludges containing silver, ignitable wastes, spent solvents and paint wastes.

The objective of designing the sample within the framework of these 22 industry groups was to develop accurate industry profiles for these industry groups. Profiles of these groups will provide a better basis for the regulatory impact analysis of alternative regulatory strategies than a single profile for all industries because these groups differ widely in the types and quantities of waste generated and, potentially, in their waste management practices. Appendix A, Table 1 presents a listing of the SIC codes in each of the 22 industry groups.

3.2.3 Development of the Sampling Frame

In developing a sampling frame for the small quantity generator survey it was necessary to obtain a list of establishments in the 125 SIC categories included in the survey that was as comprehensive as possible. Based on a coverage analysis using SIC code counts from County Business Patterns, the Duns Market Identifiers (DMI) file was selected as the best list available. The DMI file contains over five million establishment listings and provides information on each establishment such as SIC code, number of employees, sales volume, and geographic location. The DMI file was, however, also expected to contain listings for non-existent establishments (out-of-business establishments, etc.). This was taken into account in determining the required sample size for the small quantity generator survey. It was necessary to use a list of secondary schools compiled by Market Data Retrieval because these establishments are listed in SIC 8211 together with elementary schools in DMI, and the survey was concerned only with secondary schools.

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[2] Blueprinting and Photocopying Services; Commercial Photography, Art and Graphics; Photofinishing Laboratories; Museums and Art Galleries.

3.2.4 Sample Size Requirements

A major objective of the survey was to provide an estimate of the number of small quantity generators in each industry group, as well as the proportion of establishments that are small quantity generators, and to provide estimates of the waste management practices of all small quantity generators in an industry group. For the estimate of the percentage of establishments in an industry group that are small quantity generators, 95 percent confidence limits of ± 3 percent were desired. For estimates of small quantity generator waste management practices, 95 percent confidence limits--for the case in which 50 percent ± 4 percent employed a certain practice --were set as the goal. The expected proportion of small quantity generators in an industry group was therefore an important consideration in the sample design because small quantity generators constitute a subclass of establishments in an industry group upon which estimates of waste management practices would be based. In addition, the likely rate of sample attrition due to non-response (estimated at 40 percent) and the sampling of ineligible establishments (large quantity generators, out-of-business establishments, duplicate listings, out-of-date addresses, etc.) in the DMI file (estimated at 20 percent) were important considerations in designing the sample. These factors had to be incorporated into the sample size calculations to ensure that enough completed questionnaires would be received to achieve the desired level of precision for the estimates.

The total sample size calculated for the survey equaled 48,849 establishments. The sample size calculated for each industry group was allocated to the strata formed in each industry group on the basis of SIC code and size of establishment (0-9 employees versus 10 or more employees) to ensure that all SIC codes within an industry group and that both large and small establishments would be adequately represented in the sample. In general, the sample was allocated proportionally to the strata forming an industry. A limited number of SIC codes of special interest to EPA were over-sampled to ensure a sufficient sample size for separate analysis on an SIC code basis. These SIC codes are identified in Appendix A, Table 1. Within each stratum, the sample was selected using simple random sampling without replacement.

The sample was not stratified by geographic location because the survey was intended to provide national, rather than regional, estimates for the number of small quantity generators and their waste generation and management practices. Therefore, all of the survey results presented in this report are for establishments across the entire U.S. The survey data cannot be used to develop reliable regional or state estimates, however approximate regional or state estimates can be developed from the survey data in conjunction with regional or state data from County Business Patterns.

3.3 Questionnaire Design

The questionnaire was designed to obtain information regarding hazardous waste generation and handling. Specifically, it asked for the average, maximum and minimum monthly quantities of waste generated; the duration and method of storage of wastes; the method of on-site or off-site treatment, recycling, or disposal of wastes; and, if the waste was shipped off-site, the method of transport.

To succeed in gathering the needed data, the questionnaire had to be detailed enough to address some of the complexities inherent in hazardous waste management, yet straightforward enough to be completed by a diverse range of respondents in both manufacturing and service industries, many of whom were expected to be unfamiliar with hazardous waste regulations and terminology.

To address this issue, Abt Associates used the information collected in its review of SIC codes to tailor the questionnaire to sampled establishments according to the wastes they were expected to generate. Each establishment received a questionnaire which asked specifically about the generation and management of only those waste streams that the establishment was expected to generate. The number of expected waste streams for a firm ranged from one to eight. For each waste stream, the respondent was asked to indicate whether the firm generated the waste, the quantity generated, and how the waste was managed and disposed of. Thus, respondents in each industry group received a questionnaire which contained a "core" set of questions asked of all respondents and one to eight sets of waste stream specific questions for wastes the industry group was expected to generate. Appendix B provides a sample questionnaire.

This approach to questionnaire design had two important advantages. First, it reduced respondent burden by specifying which wastes were hazardous, thereby not requiring the respondent to make the determination. Second, it focused the survey on RCRA-regulated waste without requiring the respondents to review the entire list of hazardous wastes in the Code of Federal Regulations, thereby preventing, to the extent possible, the inclusion of some non-RCRA-regulated waste. It is important to note, however, that waste streams identified were necessarily broad and may have led to the inclusion of some quantities of non-regulated waste. For instance, one waste stream was "Spent Solvents" which could include both RCRA-regulated and unregulated substances.

In addition to seeking detailed information about specific wastes, the questionnaire also contained questions on whether the establishment generated any other hazardous waste or "wastes that required special handling." In keeping with efforts to reduce respondent burden and to improve the quality of the data collected, a check list of all of the waste streams identified in developing the survey was provided for the respondent to review.

Given the structure of the questionnaire, two caveats exist in the survey data. First, it is impossible to avoid some double counting of small quantity generators and associated waste quantities when examining breakdowns by management practices. It should be noted that the double counting does not affect estimates of the total number of small quantity generators, the total waste quantity generated, or the proportion of small quantity generators that are SQGs and VSQGs. Furthermore, the degree of double counting is generally less than 10 percent. The factors contributing to this situation are:

- To minimize the number of answers required to complete the questionnaire, several questions were designed to allow for multiple response. For example, a respondent could store some of his waste in a pail and the rest in a 55-gallon drum, or he could manage some of his waste on-site and ship the rest off-site. In the latter case, the respondent would be counted as both a small quantity generator managing waste on-site and as a small quantity generator shipping waste off-site. This occurred at only 6 percent of the establishments responding to the survey.

- To allow for targeting specific waste streams for industry groups, additional occurrence of double counting was introduced into the data base. If an establishment produced multiple waste streams, particularly if these wastes were handled differently, that establishment's management practices were double counted.

A second caveat is that the results of the survey are two-tiered. Respondents provided detailed reports of their generation and handling practices for wastes that were specifically identified or targeted for their type of establishment, while for additional, non-targeted wastes, they reported that the waste was generated but did not provide any in-depth information concerning waste quantities or management practices. However, rough estimates of the quantities of these non-targeted wastes were derived from mean values of the quantity of waste generated per establishment, which were based on detailed information reported by generators of targeted wastes. Therefore, when management practices and waste quantity information are reported in the following chapter and in the industry profiles, the results are based solely on responses from the 84 percent of the small quantity generators identified in the survey who reported that they generated targeted wastes. The results presented regarding the total number of small quantity generators and total quantity of waste generated, on the other hand, include respondents reporting the generation of targeted wastes as well as those reporting the generation of additional waste streams only.

3.4 Survey Implementation

3.4.1 Conduct of the Survey

This section of the report presents a brief discussion of the small quantity generator survey procedures. Readers requiring more detailed information concerning the conduct of the survey are referred to the Small Quantity Generator Survey Methodology Report, October 1984.

The two central components of the survey procedures were:

- Questionnaire mailings: An initial mailing to 48,849 establishments, and a second mailing to approximately 20,000 establishments not responding to the first mailing; and

- Two rounds of follow-up telephone calls to non-respondents: The first round was designed to encourage non-respondents to complete the questionnaire and to identify when a second questionnaire should be sent. The second round was designed to allow respondents to complete the questionnaire during the course of the telephone call.

To augment these survey components, two additional systems of communication between respondents and Abt Associates were established:

- A toll-free telephone line to Abt Associates was provided so that respondents could obtain assistance in completing the questionnaire if needed. Approximately 1,500 respondents called in on this line.
- Data retrieval or clarification calls were made to respondents who returned questionnaires with incomplete or ambiguous responses.

These survey procedures were designed to maximize the survey response rate and the quality of the data obtained. The reminder calls and remailing of questionnaires were effective in dramatically increasing the survey response rate. The initial response rate prior to the reminder calls was approximately 15 percent. After the first round of reminder calls were completed and questionnaires remailed, the response rate more than doubled to 32 percent. An additional 9,600 survey responses were obtained as a result of the second round of reminder calls, raising the total number of survey responses to 18,648 and the final response rate to 52.6 percent.

More than 2,000 respondents (over 10 percent) were contacted by telephone as part of the data retrieval effort. This element of the survey procedure greatly enhanced the quality of the data by clarifying responses to key questions concerning waste quantities generated and waste management practices.

3.4.2 Survey Validation

A preliminary analysis of the survey data raised concern that respondents in certain industry groups may have misinterpreted the questionnaire. It was found that, in some cases, the number of small quantity generators within an industry group was significantly less than what was expected. Qualitative information collected from reminder telephone calls to non-respondents and from Abt Associates' records of calls received on the toll-free respondent assistance telephone line indicated that there were several possible sources for these discrepancies between actual and expected results:

- Some establishments generated small quantities of waste but considered the amount to be insignificant and therefore did not fully complete the questionnaire.

- Some respondents had difficulty in understanding the descriptions of the waste types and may therefore have incorrectly reported not generating a waste stream.

- Some respondents did not consider waste streams that were recycled as "waste." They felt that because they recycled the material, it should not be counted as a waste.

- Technological process changes within an industry could reduce or eliminate the generation of hazardous waste or change the characteristics of the hazardous waste generated.

- Several types of establishments were included in the survey for waste generation activities that are somewhat ancillary to their primary functions. For example, schools and colleges were included because they were expected to generate hazardous waste in laboratories and wood and metal shops. Automobile dealers were included because they were expected to generate hazardous waste in performing maintenance. Some of these establishments did not think of themselves as generating any hazardous waste, and they responded according to that assumption.

Based on these findings, it was determined that a validation study of the results for six industries would be conducted to explore and delineate the impacts of these factors on the quality of the survey data. The industry groups studied were Vehicle Maintenance, Metal Manufacturing, Construction, Furniture Manufacturing and Refinishing, Cleaning Agent and Cosmetic Manufacturing, and Other Manufacturing (Miscellaneous Plastics Products).

To validate survey results for these industry groups, a random sample of non-generators selected from respondents to the survey were recontacted by telephone and a second questionnaire was administered. This questionnaire was composed of selected key questions from the original questionnaire regarding quantity and type of waste generated, method and duration of waste storage, and ultimate disposition of the waste. The results of the validation interviews were entered into a separate data file, which was used to enhance the survey data as follows:

- The subsample of non-generators selected for the validation study constituted a separate data set. Approximately 23 percent of these establishments were determined to be small quantity generators in the validation study, even though they had indicated otherwise in their original responses.

- The proportion of small quantity generators found in the validation study sample for a given industry or SIC code was used to estimate the number of small quantity generators among the establishments initially estimated to be non-generators based on the survey results. This number, added to the original estimate of the number of small quantity generators, became the revised estimate.

- The information obtained concerning the waste management practices of these newly identified small quantity generators was assigned appropriate weights and analyzed in conjunction with the survey data.

Over 1,500 follow-up interviews of respondents in the six industry groups were completed. There was a wide range in results by industry group, with Vehicle Maintenance having the highest percentage of small quantity generators among non-generator respondents (49 percent). The lowest occurrence of small quantity generators was found among Cleaning Agent and Cosmetic Manufacturing and Furniture Manufacturing and Refinishing, with small quantity generators comprising 9 and 11 percent, respectively.

3.5 Weighting and Imputation

3.5.1 Weighting Methodology

In order to generalize from the sample to the target population, it was necessary to develop weights. This involved several steps, each of which is discussed below.

Each of the 48,849 sampled establishments was assigned a status code that placed it into one of three categories:

1. Completed Questionnaire Returned by Establishment - This category includes questionnaires completed by both small quantity generators and non-generators;

2. Non-respondent Establishments - This category includes establishments that did not respond to the survey; and

3. Ineligible Establishments - This category includes establishments that were large quantity generators, out-of-business, or not in business in 1982, as well as establishments that had actual SIC codes that were not in one of the primary industries.

For each sample stratum, the establishment population count from the DMI file was divided by the number of completed questionnaires returned plus the number of ineligible sample establishments. This basic non-response adjusted weight reflects the fact that some establishments in the DMI file are ineligible for the reasons shown above.

This basic weight was then ratio-adjusted to bring the estimated count from the sample for detailed employment size categories (i.e., 0-9, 10-19, 20-49, 50-99, 100-499, 500-999, and 1,000 or more employees) into agreement with the DMI file population counts. The sample, which was initially stratified by only two employment size categories, 0-9 and 10 or more employees, was subdivided into more detailed employment size substrata to permit comparison of sample counts and population counts in the DMI file for each of the employment size categories.

Once the weights had been ratio-adjusted, the sum of the weights for sample establishments that completed the questionnaire and those sample establishments that identified themselves as large quantity generators was compared on an industry group basis with population counts from the 1982 County Business Patterns. These counts were taken to be accurate estimates of the total number of establishments in each industry group and were therefore used to check for undercoverage or overcoverage in the weighted survey count of establishments in each industry group. To be eligible to respond to the questionnaire an establishment must have been in business at the time of the survey and also must have been in business in 1982, the time reference used in asking the questions. For those industry groups where the weighted survey count was within 10 percent of the 1982 County Business Patterns count, no adjustment to the weights was made. For industry groups that differed by more than 10 percent, an adjustment was made.

Frequency distributions of the weights in each industry group were then reviewed for high weight values which could have deleterious effects on standard errors for estimates based on the survey. High weights were reduced, and a proportional spreading of the reduced weight amount was made to all the weights in that industry group. This method of weight smoothing reduced variations in the weight values, while maintaining the same estimated population count for the industry group.

A final step in the weighting process took place only in those strata that were included in the validation study. As described in the previous section, the validation study involved the selection of a subsample of non-generators from the validation strata. The non-sampled, non-generators were then removed from the data base, and the weights of the sampled non-generators were adjusted upwards based on the sampling fraction employed in each validation stratum. Appendix A, Table 1 provides information on the number of completed questionnaires before and after the data base was restructured to incorporate the validation study subsample.

3.5.2 Imputation Methodology

The questionnaire contained a set of important variables that would be used to estimate totals (e.g., total amount of waste generated in an industry group). Because item non-response existed, totals would be underestimated unless values on questionnaires with missing data for one or more of these variables were imputed. Listed below are the variables for which values were imputed when an establishment failed to supply a response and the imputation method(s) used:

	Variables	Imputation Method(s)
Q.4:	Full-Time Average Employees	Hot-Deck imputation using DMI file employee count to form imputation classes.
Q.4:	Part-Time Average Employees	Hot-Deck imputation using stratum to form imputation classes.
Q.6 - Q.10:	Waste Amount Questions	Deductive imputation and Hot-Deck imputation using total employees to form imputation classes for each waste type.
Q.14 & Q.15:	Duration of Waste Storage	Deductive imputation, and mean-value imputation using industry group as the imputation class variable.

The deductive imputation method applies to those situations where a missing response can be deduced with a high probability from other variables in the data base for that establishment. Mean-value imputation involves dividing the sample into imputation classes and using the imputation class mean for the variable as the imputed value for establishments with a missing response. The Hot-Deck method also uses imputation classes; however, donor establishments (i.e., establishments that have supplied answers) within the imputation classes supply the imputed value to establishments with a missing response.

3.6 Statistical Reliability

The estimates presented in this report are based on a survey of establishments in the primary industry groups, extrapolation of the survey results to other similar industries, and analysis of incidental generators in additional industries. This discussion of the reliability of estimates is limited to estimates based on the survey data alone.

These estimates are based on a national sample of establishments and will therefore differ somewhat from the figures that would have been obtained if a complete census of the target population had been taken. The standard error of an estimate is a measure of sampling variability, that is, a measure of the variations that might occur by chance because only a portion of the target population was surveyed. The 90 percent confidence limits of an estimate are obtained by multiplying the standard error by 1.65. The chances are 90 out of 100 that the sample estimate would differ from a complete census by an amount less than plus or minus the 90 percent confidence limits.

Standard errors and 90 percent confidence limits were calculated directly for the estimated total number of small quantity generators and total waste generated by small quantity generators for:

1. The entire population,
2. Industry groups, and
3. Selected waste stream profiles.

Within each of the above categories, standard errors and 90 percent confidence limits were also directly calculated for the estimates of the quantity of wastes and the number of generators managing waste on-site and shipping waste off-site. Figure 3.1 displays the 90 percent confidence for these six key estimates, derived for the entire population. The 90 percent confidence limits for the estimated number of small quantity generators are 378,000 ± 13,000 (or ± 3.4 percent)[3]. For the estimate of total waste generated the 90 percent confidence limits are 598,000 MT/yr. ± 66,000 MT/yr. (or ± 11 percent). That is to say for the estimate of the total number of small quantity generators, the chances are 90 out of 100 that the true population figure is within 3.4 percent of the sample estimate of 378,000. For the waste generation estimate, the chances are 90 out of 100 that the true population figure is within 11 percent of the sample estimate of 598,000. A similar relationship holds for the on-site and off-site estimates of the total number of small quantity generators and total waste generated. The lower degree of statistical reliability for the waste amount estimates is due to the variability in waste quantities reported by small quantity generators and the skewed waste distribution -- 30 percent of all small quantity generators generate 82 percent of the total small quantity generator waste. Appendix C presents the formula used to calculate the standard error of the key totals.

The tables in this report provide numerous estimates, of on- and off-site waste management practices, reported as percentages of the number of small quantity generators managing waste on-site or shipping waste off-site, respectively. Although standard errors were not directly calculated for these estimates, approximate 90 percent confidence limits can be derived for estimates of the percent of small quantity generators in an industry group or selected waste stream profile who use a practice of interest. The formula for the approximate 90 percent confidence limits for a percentage using a specific practice equals:

$$\text{90 percent confidence limits} = \pm 1.65 \sqrt{\frac{p(100-p)}{n}}$$

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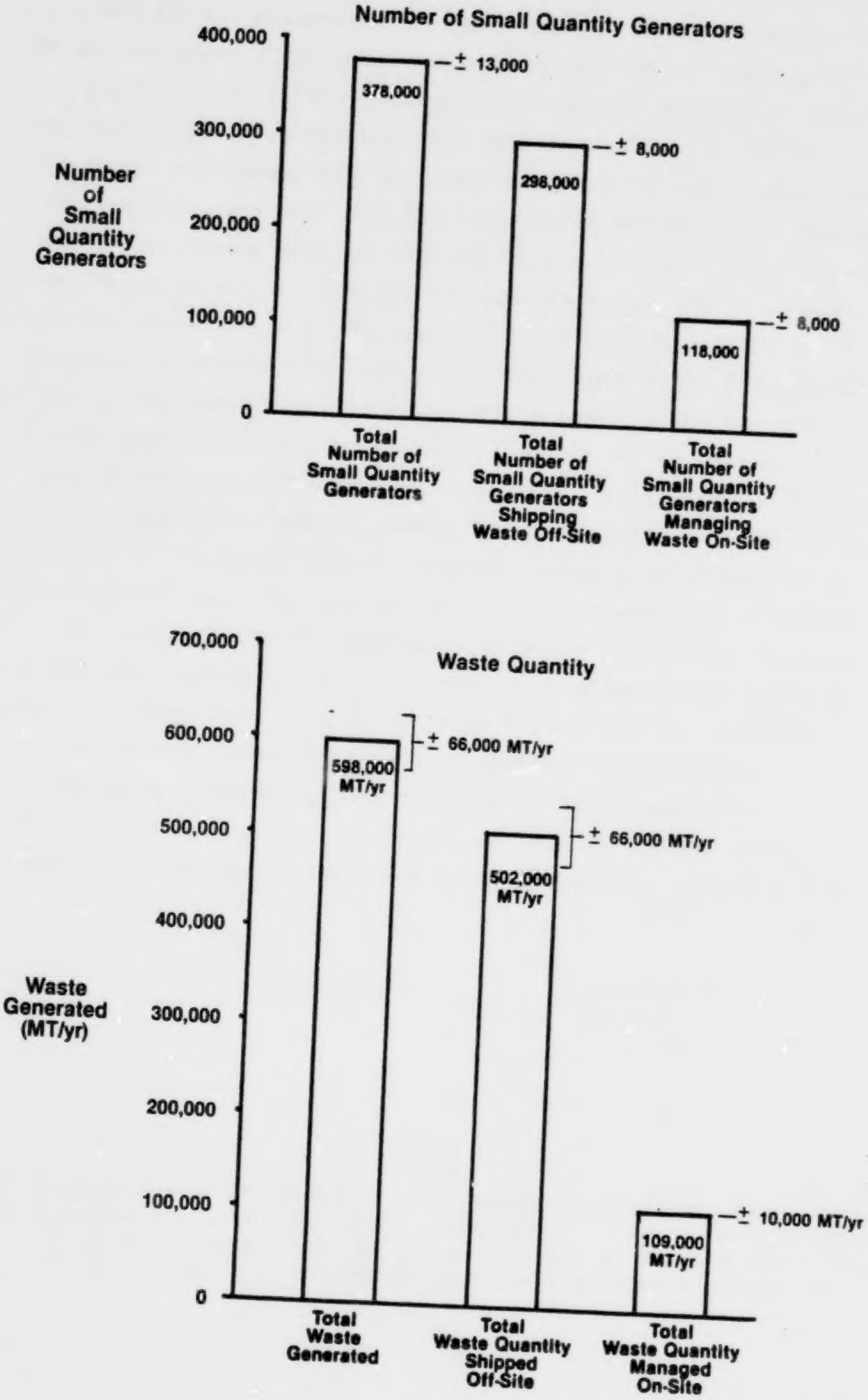
[3] This estimate includes only respondents who reported detailed information for targeted waste streams. The total estimate of small quantity generators based on the survey, including those respondents who reported the generation of additional, non-targeted waste streams only is 450,000 ± 13,000 (or ± 2.9 percent).

Figure 3.1
Reliability of Estimates:
90 Percent Confidence Limits for Six Key Estimates



where p is the percentage of interest and n is the number of responses the estimate is based on. The number of responses is provided as a footnote to each industry group and waste stream profile table. The formula given above assumes simple random sample and therefore gives approximate 90 percent confidence limits because it disregards the stratification and weighting that was part of the actual sample design.

4.0 RESULTS OF THE SURVEY

This section presents the results of the survey of small quantity generators conducted between January, 1983 and October, 1984. In addition, the survey data presented in this section are supplemented by more general data obtained through analysis of non-surveyed industries. The results summarized below include:

- Overall national estimates of the number of small quantity generators and the quantity of hazardous waste they generate.
- More detailed descriptions of the 22 major industry groups that contain significant numbers of small quantity generators and the types of waste these establishments generate.
- Estimates of the management practices currently utilized by small quantity generators in the primary industry groups targeted in the survey.

The data for each set of results were drawn from different sources comprised of combinations of the three major categories of industries identified in designing the small quantity generator survey. Briefly, as noted in previous sections, the three categories are:

- Primary industries targeted because they were expected to contain a significant number of the small quantity generators. Detailed information concerning the number of generators, waste streams and quantities generated, and waste management practices was gathered for establishments in these industries. There are an estimated 450,000 small quantity generators in these industries. Specific information concerning waste generation and management practices is available for 378,000 of these generators. Information for the remaining 72,000 generators is based on the responses of establishments that reported producing only non-targeted wastes for which information concerning waste quantity and management practices is not available. However, a rough estimate of the quantity of non-targeted waste generated was derived from mean values for the quantity of waste generated per establishment, which were based on detailed information reported by establishments generating targeted waste streams. The latter generators are included only in estimates of the total number of small quantity generators and total waste quantity generated.

- Secondary industries not included in the survey because they were expected to be similar to specific primary industries. Data concerning the number of small quantity generators, waste streams generated, and generation rates for these industries were developed by analogy to the primary industries. These small quantity generators are included in estimates of the total number of small quantity generators, and waste quantities generated.

- Industries not included in the survey because they were expected to contain only incidental small quantity generators. Very approximate estimates for these SIC codes were developed and are included only in the overall estimates of the total number of small quantity generators and the total waste quantity generated.

There is likely to be some degree of inaccuracy in the results presented here, due to confusion or misrepresentation on the part of the respondents, which cannot be accounted for by estimations of standard errors. The survey results presented in this Section and in the Appendices to this report are thus intended to provide the best available estimates of small quantity generator waste generation and handling methods within broadly defined industry groups. The results should not be construed as exact estimates of numbers of small quantity generators and quantities of waste produced within specific industries.

4.1 Overall Estimate of the Number of Small Quantity Generators and Quantities of Waste Generated

Although the overall number of small quantity generators is very large, these generators contribute a relatively small proportion of the total quantity of hazardous waste generated nationally. There are approximately 600-660 thousand small quantity generators nationally. This number consists of 450,000 generators in the primary SICs surveyed and 85,000 generators in the secondary SICs treated by analogy plus 65,000 to 125,000 incidental generators in the remaining SICs (assuming, as discussed in Section 2.2, that 20 to 40 percent of the establishments in the latter industries may at times generate small quantities of hazardous waste).

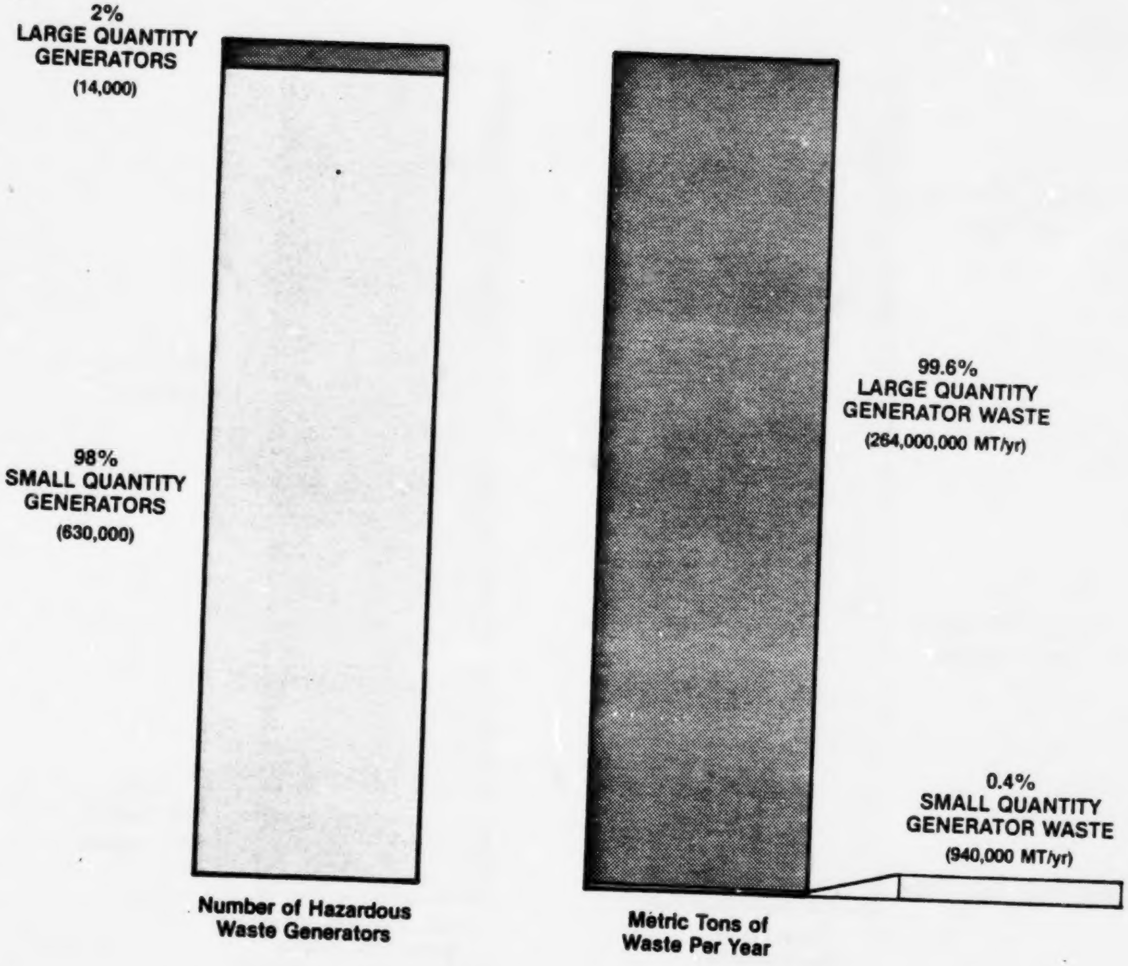
Small quantity generators produce about 940 thousand metric tons of waste annually. This waste generation estimate was derived from the three groups of industries studied. The primary group of industries accounts for 798 thousand metric tons (598 thousand estimated from detailed information reported for targeted wastes and 200 thousand estimated from information reported for non-targeted wastes). The secondary SICs include generally smaller generators and account for about 93 thousand metric tons. Finally, the waste produced by incidental generators in the third group is likely to be very small. A rough estimate of waste generation per generator for this group is 40-50 kg per month. At this rate the third group would account for approximately an additional 50 thousand metric tons of waste per year.

Small quantity generators represent a large proportion of the number of hazardous waste generators nationally, yet account for only a very small fraction of hazardous waste generated (Figure 4.1). About 98 percent of the hazardous waste generators nationally are small quantity generators, but these generators contribute only about 0.4 percent of the total hazardous waste generated. This overall conclusion is independent of the number of generators in the third category of incidental generators. Even if the number of generators and waste generation for this category is doubled, small quantity generators would still account for over 98 percent of the number of generators and less than 0.5 percent of the total waste.

Small quantity generators are closely associated with major population centers. Nearly 70 percent of small quantity generators surveyed are located in metropolitan statistical areas (MSAs), as indicated by data in the DMI file for each sampled establishment. This finding is confirmed by other studies. For example, in a study of small quantity generators in New York State, Abt Associates determined that over two thirds of the small quantity generators are located in the populous areas of New York City, the lower Hudson Valley and Long Island.

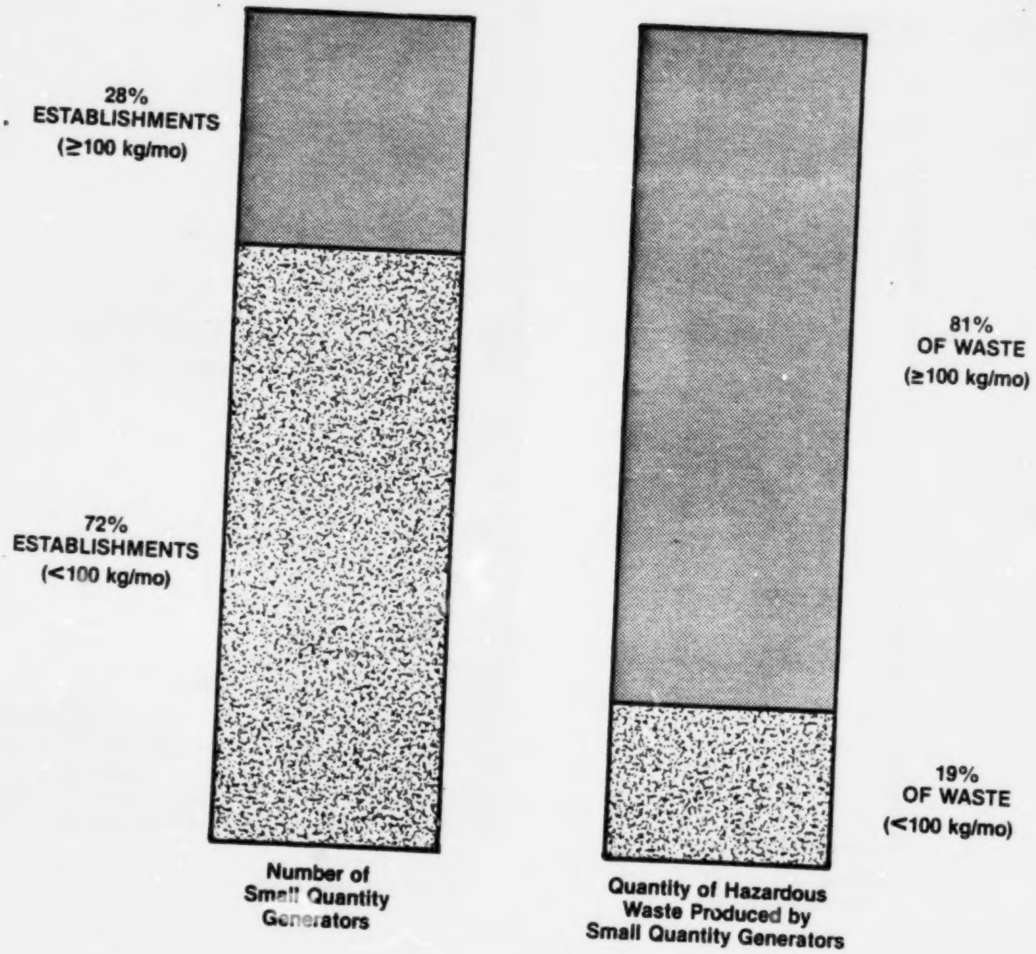
Among small quantity generators, as shown in Figure 4.2, generators of more than 100 kg per month (SQGs) represent only 28 percent of the small quantity generators in the primary industries surveyed and the secondary industries examined by analogy, but they account for more than 80 percent of the total quantity of hazardous waste generated in these groups. The incidental generators in the third group studied are likely to be even more heavily

Figure 4.1
Breakdown of Hazardous Waste Generation by Large and Small Quantity Generators



SOURCE: Small Quantity Generator Survey data and analysis of secondary industries and additional incidental small quantity generators. Large quantity generator estimates based on *National Survey of Hazardous Waste Generators*, 1984.

Figure 4.2
Breakdown of Small Quantity Generators by Waste Quantity Category



SOURCE: Small Quantity Generator Survey data and analysis of secondary industries: 378,000 small quantity generators estimated from detailed information for targeted waste streams and 85,000 small quantity generators from secondary industries – 691,000 metric tons of waste per year.

concentrated in the less than 100 kg per month category (VSQGs) but no specific estimates are available. However, extrapolating the available figures for the distribution of small quantity generators between SQGs and VSQGs to the overall estimate of the number of small quantity generators and quantity of small quantity generator waste yields an overall national estimate of 175 thousand SQGs generating 760 thousand metric tons of waste annually. Since the reauthorization of RCRA specifies reporting and management requirements only for SQGs, the remaining 455 thousand small quantity generators who are VSQGs will not be affected by the statute.

It is interesting to note that the results of this survey are relatively consistent with the data used to develop EPA's 1980 regulations excluding small quantity generators from full Subtitle C regulations. The 1980 data indicated that there were approximately 695 thousand generators of less than 1,000 kg per month and that these generators account for about 635 thousand metric tons per year of waste as compared to 600-660 thousand generators producing 940 thousand metric tons of waste estimated by this survey. In addition, the distribution between SQGs and VSQGs is similar in the two surveys. The 1980 results indicate that SQGs generating between 100 and 1,000 kg per month of waste account for 19 percent of the small quantity generators and 78 percent of the small quantity generator waste as compared to 28 percent and 81 percent respectively estimated in this survey.

This survey, however, provides information concerning small quantity generators that is both more reliable and more detailed than that developed for the 1980 regulations. The 1980 data are based on compilations of state survey data, projecting national results on the basis of results obtained by 20 states. These state results were uneven in quality and were obtained at different times, but they were the only data available at the time on which to base an estimate of small quantity generators in the absence of a comprehensive national survey. The 1980 data, moreover, do not provide information concerning the distribution of waste quantity by waste stream.

4.2 Distribution of Small Quantity Generators by Industry Group and Waste Stream Generated[4]

Nearly 85 percent of the small quantity generators are in non-manufacturing industries (Figure 4.3). The largest categories of establishments in non-manufacturing industries are vehicle maintenance and construction establishments, which account for 50 percent and 12 percent of the total number of small quantity generators, respectively. Other non-manufacturing establishments, including laundries, photographic processors, equipment repair shops, laboratories and schools, account for nearly 25 percent of the total number of establishments. The remaining 15 percent of the small quantity generators consists of manufacturing establishments, with two thirds of these in metal manufacturing and the remaining third in other manufacturing industries, such as printing, chemical manufacturing and formulating, furniture manufacturing and textile manufacturing. Table 4.1 highlights the importance of vehicle maintenance and metal manufacturing as contributors to the overall number of small quantity generators and the quantity of waste generated by small quantity generators. Appendix D provides detailed industry-specific profiles, including descriptions of management practices for each industry group surveyed.

As shown in Figure 4.4, the distribution of SQGs differs from that of VSQGs. Most noticeably, vehicle maintenance dominates among SQGs. Aside from vehicle maintenance, however, non-manufacturing establishments are more heavily concentrated among VSQGs, and manufacturing establishments tend to be more concentrated among SQGs. In particular, as shown in Table 4.1, certain service-related industry groups such as pesticide end users and application services, laundries, equipment repair shops, construction, furniture, printing, educational establishments and wholesale and retail establishments are heavily concentrated in the VSQG category. By contrast, a relatively large number of establishments engaged in chemical manufacturing, wood preserving, textile manufacturing, cleaning agent manufacturing and paper products manufacturing are SQGs.

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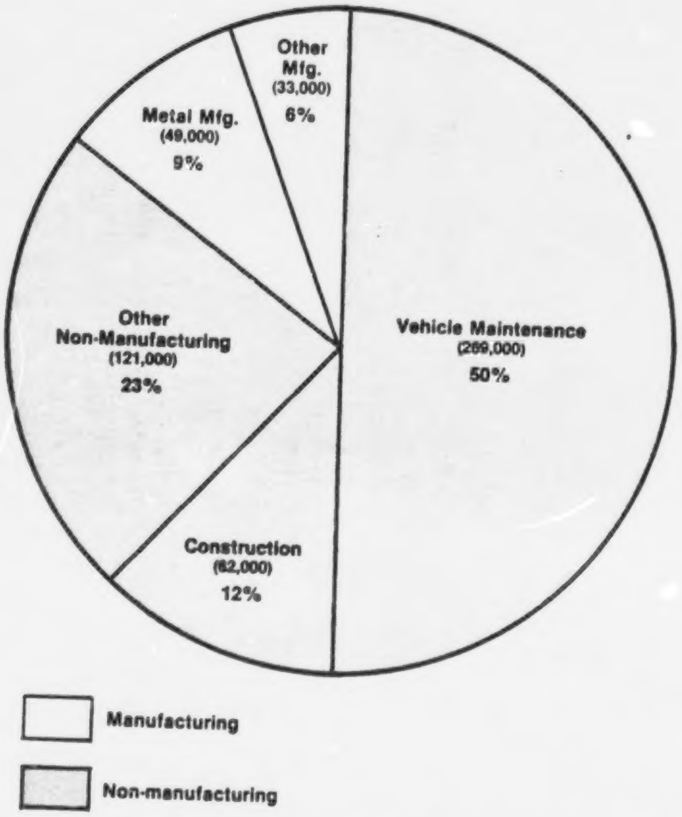
[4] The results presented in this section are based on the primary groups and secondary industry groups treated by analogy. They exclude establishments in the group of incidental generators.

Figure 4.3
Distribution of Small Quantity Generators by Industry Group



SOURCE: Small Quantity Generator Survey data and analysis of secondary industries: 535,000 small quantity generators.

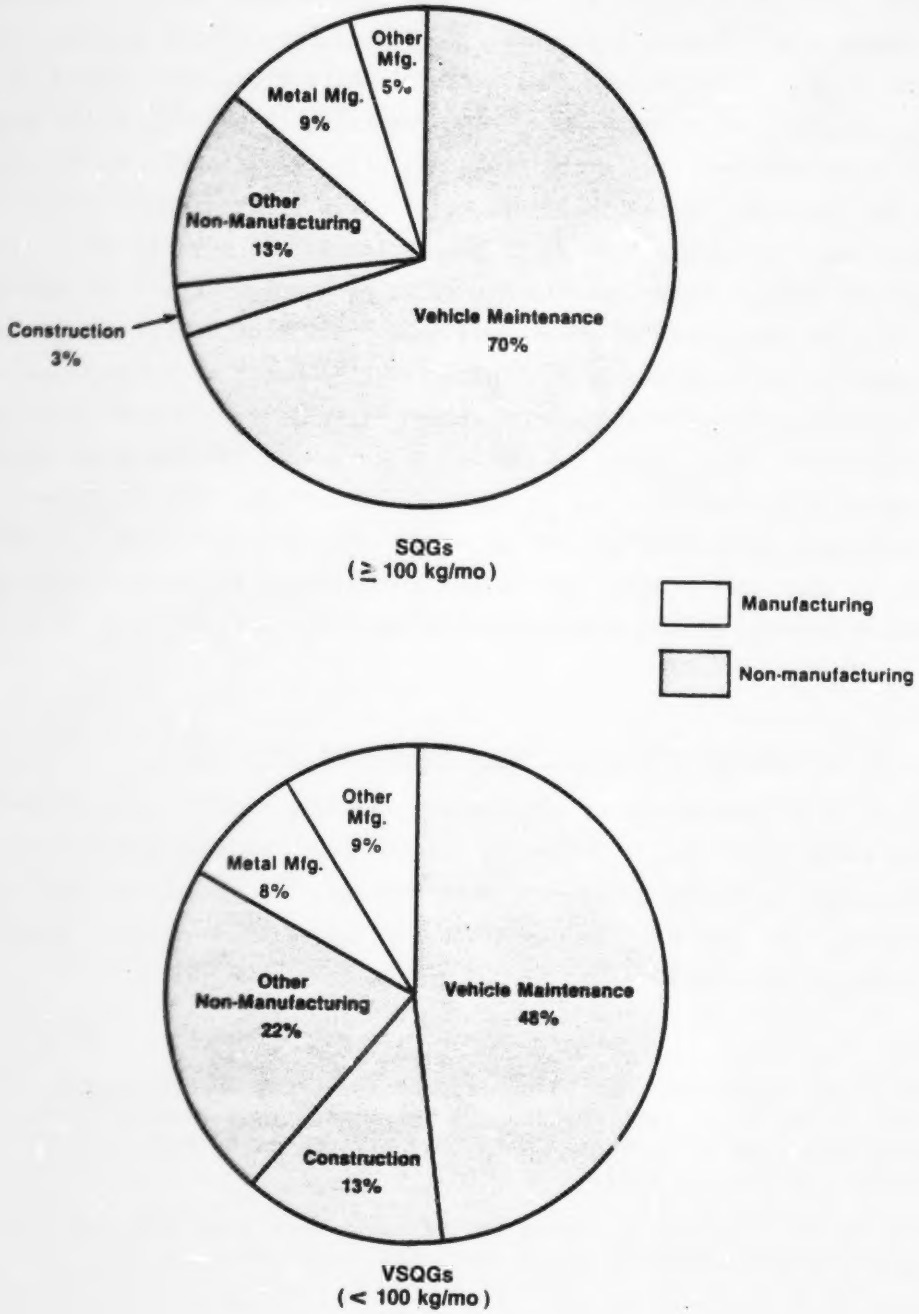
Table 4.1

NUMBER OF SMALL QUANTITY GENERATORS BY INDUSTRY GROUP AND QUANTITY OF WASTE GENERATED

	VSQGs: Generators of <100 kg of Waste Per Month		SQGs: Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Percent of Generators	Number of Generators	Percent of Generators	Number of Generators	Waste Quantity (MT/yr)
Pesticide End Users	1,392	86	231	14	1,623	1,122
Pesticide-Application Services	7,786	82	1,660	18	9,444	8,444
Chemical Manufacturing	362	48	391	52	753	2,373
Wood Preserving	86	45	107	55	193	715
Formulators	507	57	395	43	902	2,333
Laundries	13,131	84	2,515	16	15,646	13,418
Other Services	13,913	85	2,409	15	16,322	10,706
Photography	6,538	70	2,817	30	9,355	18,052
Textile Manufacturing	149	54	124	46	272	650
Vehicle Maintenance	142,105	63	82,528	37	224,632	427,287
Equipment Repair	1,526	85	269	15	1,795	943
Metal Manufacturing	26,245	70	11,076	30	37,320	64,652
Construction	11,561	91	1,117	9	12,677	5,033
Motor Freight Terminals	103	70	45	30	148	161
Furniture/Wood Manufacture and Refinishing	2,776	83	579	17	3,355	3,703
Printing/Ceramics	21,190	86	3,450	14	24,640	18,307
Cleaning Agents and Cosmetic Manufacturing	277	51	265	49	543	1,569
Other Manufacturing	1,618	63	946	37	2,564	5,361
Paper Industry	98	54	83	46	181	544
Analytical and Clinical Laboratories	5,123	80	1,286	20	6,409	7,171
Educational and Vocational Establishments	3,239	93	241	7	3,481	1,179
Wholesale and Retail Establishments	5,156	90	575	10	5,731	3,876
TOTAL	264,895	70	113,086	30	377,981	597,625

Source: Small Quantity Generator Survey data: 378,000 small quantity generators estimated from detailed information for targeted waste streams--598,000 metric tons of waste per year.

Figure 4.4
Distribution of Small Quantity Generators by Industry Group: SQGs and VSQGs



SOURCE: Small Quantity Generator Survey data and analysis of secondary industries: 535,000 small quantity generators.

Eighty-five percent of the waste generated by small quantity generators consists of lead-acid batteries, solvents and other acidic or alkaline wastes (Figure 4.5). Lead-acid batteries (primarily from vehicle maintenance establishments) account for more than 60 percent of the small quantity generator waste.[5] An additional 18 percent of the small quantity generator waste consists of solvents from metal manufacturing, vehicle maintenance, equipment repair, printing and construction, while 6 percent is made up of strongly acidic or alkaline wastes. The remaining 15 percent of the waste is made up of pesticides, photographic wastes, dry-cleaning filters and filtration residues, ignitable wastes and spent plating wastes. Table 4.2 provides a national summary of waste generation broken down by waste stream for SQGs and VSQGs. These results are shown in greater detail in Appendix E.

Unlike the number of generators, the profile of wastes generated by small quantity generators does not change significantly at a 100 kg cutoff. The distribution of waste streams generated by SQGs is essentially the same as the distribution among VSQGs. As shown in Table 4.2, lead-acid batteries, spent solvents and strong acids or alkalies account for over 80 percent of the waste generated among SQGs as well as VSQGs. The only difference in the profiles is that photographic wastes and dry-cleaning filtration residues represent 9 percent of the waste generated by VSQGs and only 5 percent of the wastes generated by SQGs.

4.3 Small Quantity Generator Waste Management Practices[6]

The RCRA amendments of 1984 impose specific requirements on small quantity generators. As described in Section 2, these requirements deal with waste disposal practices as well as with storage, transportation and reporting requirements. This subsection describes current waste management practices of small quantity generators.

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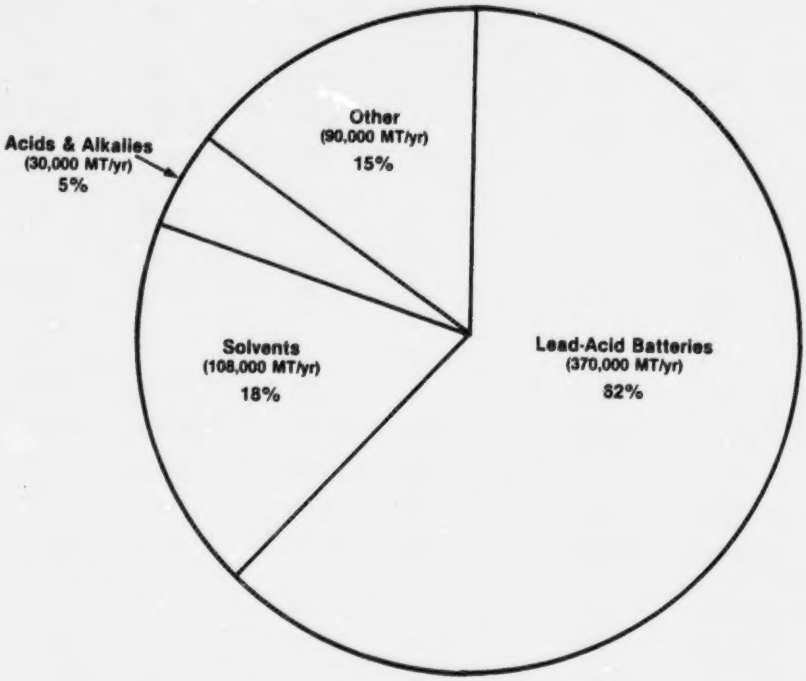
[5] It should be emphasized that 90 percent of lead acid batteries are recycled. Final rules published by EPA in January 1985 exclude lead-acid batteries from regulation except when they are stored by recyclers or reclaimers (see Section 4.4).

[6] Results in this section are based on the management practices reported by small quantity generators in the primary SIC codes surveyed.

Figure 4.5
Distribution of Small Quantity Generator Waste by Waste Stream



SOURCE: Small Quantity Generator Survey data: 378,000 small quantity generators estimated from detailed information for targeted waste streams — 598,000 metric tons of waste per year.

Table 4.2

NUMBER OF SMALL QUANTITY GENERATORS AND WASTE QUANTITY GENERATED BY WASTE STREAM

	VSQGs: Generators of <100 kg of Waste Per Month		SQGs: Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Arsenic Wastes	21	7	19	104	40	111
Cyanide Wastes	587	17	1,384	2,129	1,972	2,146
Dry Cleaning Filtration Residues	13,168	5,151	2,540	8,509	15,708	13,660
Empty Pesticide Containers	9,809	1,293	1,963	2,366	11,772	3,659
Heavy Metal Dust	48	10	40	163	88	173
Heavy Metal Solutions	15	6	30	52	45	58
Heavy Metal Waste Materials	121	31	117	537	238	568
Ignitible Paint Wastes	12,788	1,841	3,122	4,872	15,910	6,713
Ignitible Wastes	8,951	909	2,873	7,576	11,824	8,485
Ink Sludges Containing Chromium or Lead	1,093	90	83	127	1,176	217
Mercury Wastes	19	<1	0	0	19	<1
Other Reactive Wastes	1,133	88	497	1,090	1,630	1,178
Paint Wastes Containing Heavy Metals	381	12	156	7	537	19
Pesticide Solutions	3,027	1,047	1,747	5,022	4,774	6,069
Photographic Wastes	21,287	4,408	4,949	14,023	26,236	18,431
Solvent Still Bottoms	2,114	114	738	1,863	2,852	1,977
Spent Plating Wastes	3,960	493	1,422	5,275	5,382	5,768
Spent Solvents	77,629	19,445	33,475	85,923	111,104	105,368
Solutions or Sludges Containing Silver	4,482	938	2,648	7,981	7,130	8,919
Strong Acids or Alkalies	13,739	1,970	10,480	27,821	24,219	29,791
Used Lead-Acid Batteries	119,747	64,903	77,880	304,194	197,627	369,097
Waste Formaldehyde	11,930	3,454	2,014	5,396	13,944	8,850
Waste Inks Containing Flammable Solvents or Heavy Metals	3,642	263	718	1,359	4,360	1,622
Waste Pesticides	2,852	400	990	857	3,842	1,257
Wastewater Containing Wood Preservatives	88	26	108	693	196	719
Wastewater Sludges Containing Heavy Metals	894	188	790	2,216	1,684	2,404
Wastes Containing Ammonia	1,154	96	100	271	1,254	367
OVERALL	264,895	107,198	113,086	490,427	377,981	597,625

Source: Small Quantity Generator Survey data: 378,000 small quantity generators estimated from detailed information for targeted waste streams 598,000 metric tons of waste per year.

Approximately 70 percent of the small quantity generators ship their waste off-site for management, while about 20 percent practice on-site management, including RCRA exempt disposal to public sewers (Figure 4.6).[7] The remaining generators both manage their waste on-site and ship it off-site for management (for example on-site treatment prior to shipment to a solid waste facility such as an incinerator). Small quantity generators who ship their waste off-site tend to generate larger quantities of waste than those who manage their waste on-site, accounting for more than 80 percent of the waste but only 70 percent of the generators; while wastes that are managed on-site or both managed on-site and shipped off-site make up the remaining 20 percent of the waste.

Small quantity generator waste that is shipped off-site for management is mostly sent to recycling facilities. Table 4.3 indicates that 52 percent of all small quantity generators, accounting for 65 percent of the total quantity of small quantity generator waste send their wastes to recycling facilities. This component is dominated by recycled lead-acid batteries which account for more than 75 percent of the total quantity of waste that is recycled. Only 12 percent of the lead-acid batteries that are shipped off-site are not recycled and these are primarily sent to solid waste facilities.

The second most prevalent destination of waste that is shipped off-site is solid waste disposal facilities. Approximately 14 percent of the small quantity generators send their waste to solid waste facilities, but because these generators produce relatively small quantities of waste they account for only 5 percent of the small quantity generator waste. An additional 11 percent of the waste is produced by small quantity generators who ship their waste off-site, but do not know the ultimate destination of their waste. This waste is likely to be sent to solid waste facilities. By contrast, only about 4 percent of the small quantity generator waste is sent to Subtitle C hazardous waste facilities.

On-site waste management of small quantity generator waste is dominated by disposal to public sewers. About 8 percent of small quantity genera-

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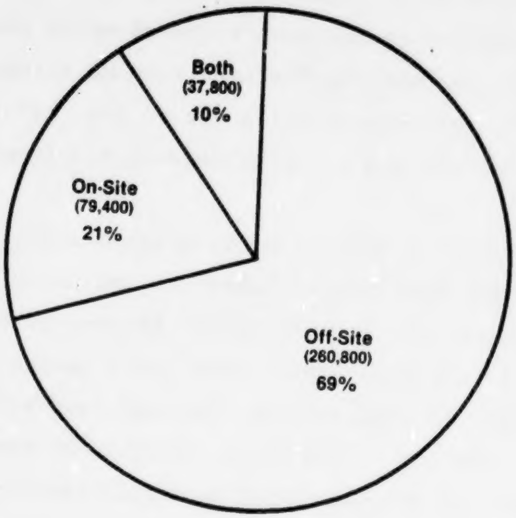
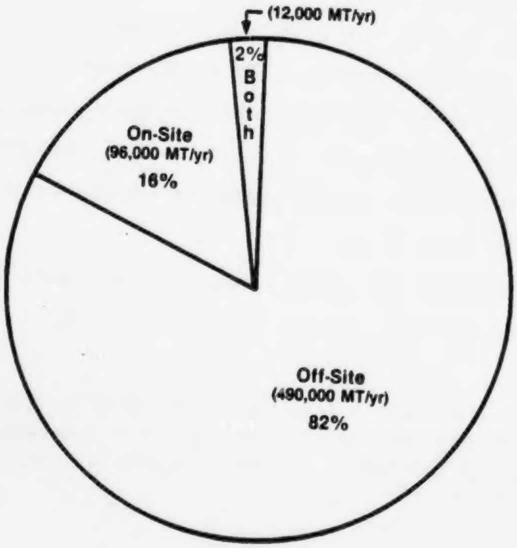
[7] Note that the results in this section do not necessarily add up to 100 percent because wastes may be subject to multiple management (e.g., treatment and disposal), and because the same generators may use different practices for different wastes.

Figure 4.6
On-Site and Off-Site Waste Management Practices for Small Quantity Generators

Number of Small Quantity Generators



Waste Quantity



SOURCE: Small Quantity Generator Survey data: 378,000 small quantity generators estimated from detailed information for targeted waste streams – 598,000 metric tons of waste per year.

Table 4.3

Distribution of Off- and On-Site Management Practices

	Percent of Generators	Percent of Waste
Off-Site		
Recycling	52	65
Solid Waste facility	14	5
Subtitle C facility	4	4
Unknown	13	11
On-Site		
Public Sewer	14	8
Recycling	8	6
Treatment	6	4

Note: Percentages do not add to 100 because of the existence of multiple management practices.

Source: Estimates based on Small Quantity Generator Survey data: 378,000 small quantity generators provides detailed information for targeted wastes - 598,000 MT/yr. of waste.

tor waste (or about 46 percent of the waste that is managed on-site) is disposed of through public sewers.[8] This waste represents more than 20 percent of the non-lead-acid battery waste produced by small quantity generators. The other major form of on-site management is recycling which is practiced by about 8 percent of the generators, accounting for 6 percent of the waste. Additionally, 6 percent of the generators responded that they used some form of on-site waste treatment. This treatment, however, may be coupled with other forms of waste management or disposal.

Generally, waste management practices by SQGs differ somewhat from those of VSQGs (Figure 4.7). SQGs are more likely than VSQGs to recycle their waste whether they practice on-site management or ship their waste off-site. Among small quantity generators who manage their waste on-site, only 23 percent of the VSQGs recycle waste, while 39 percent of the SQGs recycle. Among small quantity generators who ship their waste, only 61 percent of the VSQGs send it to recycling facilities, while 78 percent of the SQGs send it to recycling facilities.

The requirement of the 1984 RCRA amendments limiting on-site storage to 180 days is unlikely to significantly affect small quantity generators. Only 11 percent of the SQGs currently store wastes for more than 180 days (Figure 4.8). Eighty-five percent of the SQGs store their wastes for less than 90 days, and 54 percent of them store for less than one week. VSQGs have a greater tendency for storing waste for less than one week. Detailed information concerning storage methods is presented in the industry profiles in Appendix D.

Ninety-six percent of all small quantity generators shipping their waste off-site use trucks for transport (Figure 4.9). Sixty-seven percent of these generators rely on contracted haulers for transportation to off-site facilities while an additional 13 percent use public trucks (municipal solid waste disposal). Only a relatively small proportion of the small quantity generators (16 percent) utilize company-owned trucks. The remaining 4 percent of the generators shipping their wastes use other transport methods, such as

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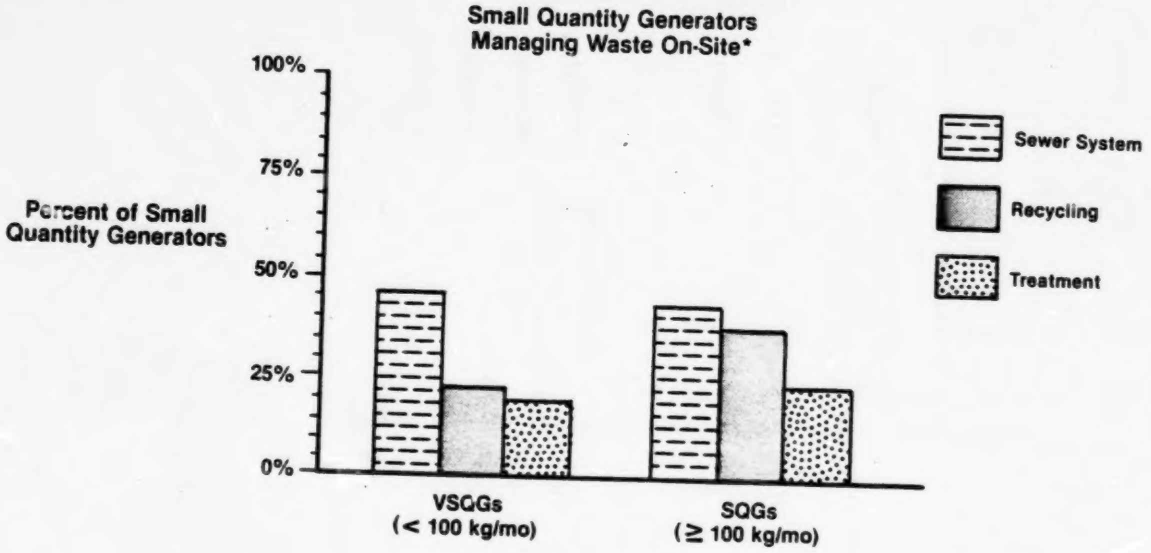
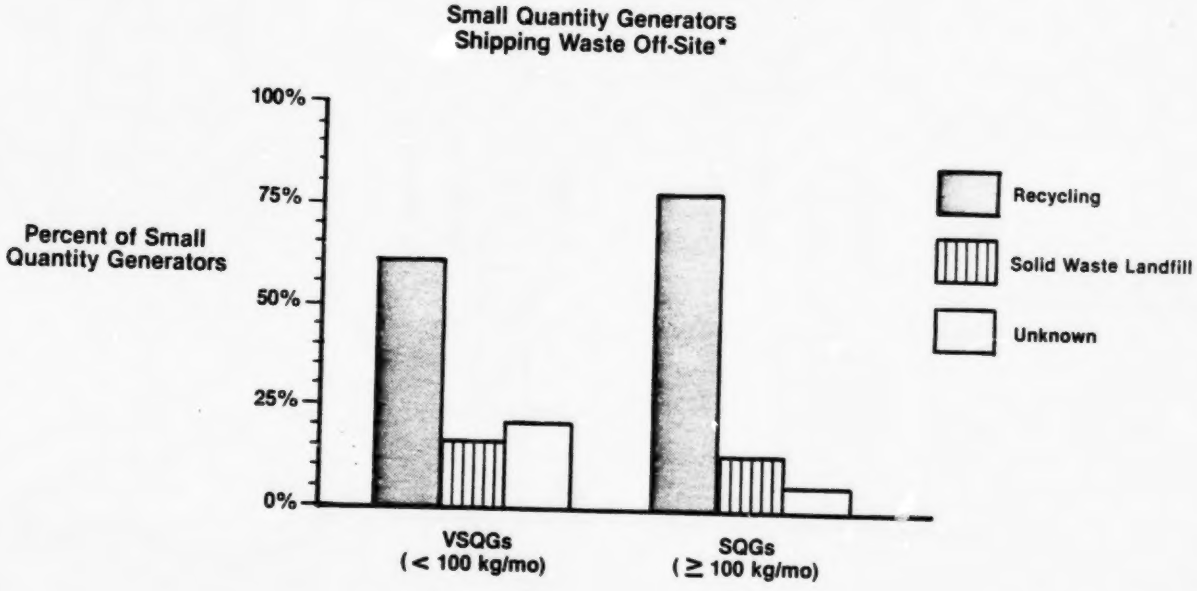
[8] Waste discharged to sewers connected to a publicly owned wastewater treatment facility (POTW) is excluded from RCRA and subject to the Clean Water Act (40 CFR § 261.4(a)).

Figure 4.7
Small Quantity Generator Waste Management Practices: VSQGs Vs. SQGs

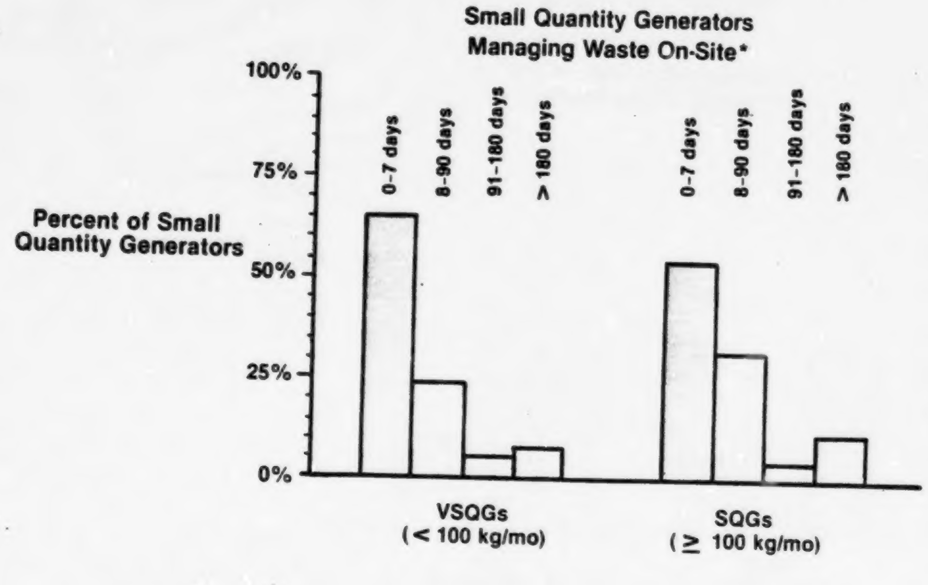


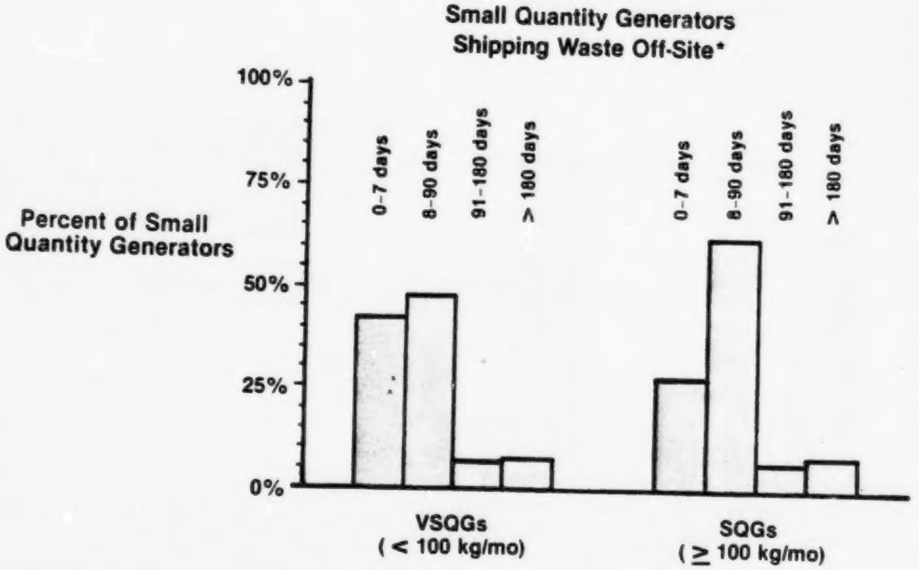


*Includes small quantity generators who both manage waste on-site and ship waste off-site.

SOURCE: Small Quantity Generator Survey data: 378,000 small quantity generators estimated from detailed information for targeted waste streams – 598,000 metric tons of waste per year.

Figure 4.8
Duration of Storage by Small Quantity Generator Waste Prior to Treatment, Recycling or Disposal



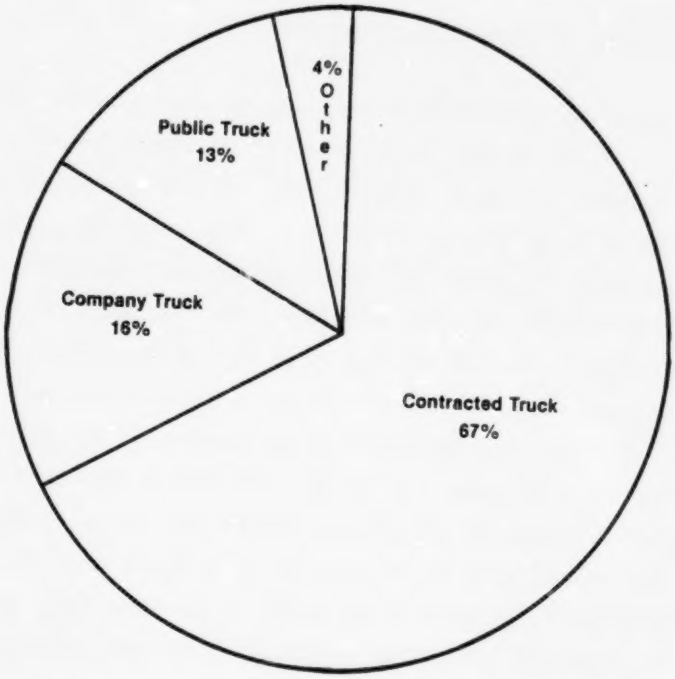


***Includes small quantity generators who both manage waste on-site and ship waste off-site.**

SOURCE: Small Quantity Generator Survey data: 378,000 small quantity generators estimated from detailed information for targeted waste streams – 598,000 metric tons of waste per year.

Figure 4.9

Waste Transport Method Employed by Small Quantity Generators



SOURCE: Small Quantity Generator Survey data: 298,000 small quantity generators shipping waste off-site.

railroad cars, barges, or pipelines. This distribution does not vary significantly between SQGs and VSQGs, although the proportion of VSQGs using public trucks is slightly higher than that for SQGs.

In most cases (82 percent of the generators shipping waste off-site) the generator notified the transporter as to the nature of the waste being transported. The predominant means of notification was a verbal statement by the generator. In 33 percent of the cases some form of written notification was provided--about 6 percent of the generators used EPA manifests, slightly over 25 percent labeled their wastes, and more than 25 percent used other forms of written notification such as invoices.

4.4 Lead-Acid Batteries that Are Reclaimed

The small quantity generator survey was designed to characterize the types and quantities of hazardous waste produced by small quantity generators, regardless of the waste's ultimate disposition. Survey data indicate, however, that used lead-acid batteries comprise a very large percentage of the hazardous waste generated by small quantity generators, and that nearly 90 percent of these used batteries are reclaimed. Current RCRA regulations exclude certain materials, including lead-acid batteries, from regulation in the hands of the generator and the transporter, provided the materials are to be recycled or reused. The regulations further exclude such materials that are to be reclaimed, in this case used lead-acid batteries, from being considered in the small quantity generator determination. In other words, when a generator determines whether or not he is subject to full RCRA requirements (i.e., if he produces greater than 1,000 kg of hazardous waste in a calendar month), he need not count the weight of his used lead-acid battery waste in his calculation.

While this exclusion may significantly impact the actual number of small quantity generators to be regulated under the new RCRA requirements, it is most likely that regulatory control over the handling of used lead-acid batteries will remain sufficient to protect human health and the environment. The U.S. Department of Transportation (DOT) lists electric storage batteries as a corrosive material, and imposes specific requirements for their transportation and handling. Any generator presently sending his used batteries to an off-site recycling or disposal facility is thus subject to DOT packaging, labeling and other shipping requirements. In addition, states that currently regulate more stringently than EPA may already require that used batteries be counted in a generator's quantity determination. Thus, in those states that have already set a 100 kg per month exclusion level, small quantity generators whose used batteries push them over the limit will continue to be regulated until such time as a state chooses to adopt the less stringent requirements in its own rules.

In any case, used lead-acid batteries are still characterized as hazardous waste because of their corrosivity, and are therefore included in all estimates of numbers of generators and quantities of waste throughout this report. Although nearly 90 percent of these used batteries are reclaimed, and thus are not included in the small quantity generator calculation, the removal of these used batteries from consideration in the small quantity generator population has a fairly minimal impact on the overall number of regulated entities.

If used lead-acid batteries are backed out of the previously presented estimates, the total number of small quantity generators is reduced to approximately 440,000. There are thus 190,000 generators which produce used batteries only, and are excluded from EPA regulation, yet covered by DOT requirements. Of the small quantity generators that remain, the number that produce hazardous waste in quantities above 100 kg per month (SQGs) is reduced from approximately 175,000 to 90,000. This effect on the number of regulated establishments is less pronounced, however, than it may at first appear, for the following reasons. Of the generators that produce used batteries only, approximately 70,000 of them generate more than 100 kg per month. These generators are then regulated by DOT whenever they ship their batteries off-site. This leaves about 15,000 out of an original 175,000 generators in the 100 to 1,000 kg per month bracket which, when they do not count their lead-acid batteries, produce waste in quantities below the 100 kg per month limit, and are thus not subject to regulation under the new RCRA requirements for small quantity generators. These other wastes may of course be subject to DOT shipping requirements, depending on their hazard class.

In sum, there are 90,000 SQGs which remain unaffected, 70,000 generators whose lead-acid batteries remove them from the population of small quantity generators, yet who are covered by DOT regulations, and approximately 15,000 generators whose hazardous waste is actually excluded from new RCRA requirements because their lead-acid batteries are not counted in the quantity determination.

APPENDIX A

Description of Sampling Frame

TABLE 1: Industry Groups and Subgroups of Interest

TABLE 2: Targeted Wastes by Industry Group

TABLE 3: Analysis of Secondary SIC Codes by Analogy to Small Quantity Generator Survey Results for Similar Primary Industry Groups

TABLE 1

INDUSTRY GROUPS AND SUBGROUPS OF INTEREST

Industry Group No.	Industry Groups and Constituent SIC Codes		Number of Establishments in the Sampling Frame[1]	Number of Establishments Surveyed	Number of Completed Questionnaires Prior to Validation Survey	Number of Completed Questionnaires After Validation Survey	Response Rate[2] (Percent)	Eligibility Rate[3] (Percent)	Estimated Number of Eligible Establishments in the Population[4]
		SIC Titles							
1		Pesticide End-Users	2,903	1,600	535	535	43.2	78.3	3,037
	SIC 7992	Public Golf Course					-	-	
	8421	Aboreta, Botanical and Zoological Gardens							
2		Pesticide Application Services	24,545	1,792	587	587	46.9	71.3	16,422
	SIC 0711	Soil Preparation Services					-	-	
	0721	Crop Planting, Cultivating, and Protection					-	-	
	0729	General Crop Services					-	-	
	0782	Lawn and Garden Services					-	-	
	0783	Ornamental Shrub and Tree Services					-	-	
	4959	Sanitorial Services					-	-	
	7342	Disinfecting and Extermination Services					-	-	
3		Chemical Manufacturing	4,541	4,588	1,044	1,044	52.6	66.1	3,104
	SIC* 2819	Industrial Inorganic Chemicals	1,811	1,854	414		55.2	67.0	
	2820	Plastics, Materials & Synthetic Rubber, Synthetic & Other Man-Made Fibers, Except Glass							
	2861	Gum and Wood Chemicals							
	* 2869	Industrial Organic Chemicals	909	943	215		48.3	64.2	

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[1] Number of establishments reported in Duns Market Identifiers File, 1982.

[2] Response rate is defined as the number of responses divided by the eligible sample.

[3] Eligibility rate is defined as the number of eligible respondents divided by the number of establishments sampled. Eligible establishments are those that are not large quantity generators and were in business during 1982 and were still in business at the time of the survey.

[4] Estimated number of eligible establishments is based on the survey results. Large quantity generators and establishments that were not in business during 1982 or at the turn of the survey are not included in this estimate.

*Subgroups of Interest which were oversampled to allow for development of separate estimates.

TABLE 1 (continued)

Industry Group No.	Industry Groups and Constituent SIC Codes	SIC Titles	Number of Establishments in the Sampling Frame[1]	Number of Establishments Surveyed	Number of Completed Questionnaires Prior to Validation Survey	Number of Completed Questionnaires After Validation Survey	Response Rate[2] (Percent)	Eligibility Rate[3] (Percent)	Estimated Number of Eligible Establishments in the Population[4]
4	Wood Preserving								
	SIC 2491	Wood Preserving	543	554	187	187	57.2	67.5	383
5	Formulators								
	SIC* 2834	Pharmaceutical Preparations	6,300	2,400	797	797	47.6	72.5	3,037
	2851	Paints, Varnishes, Laquers, Enamels & Allied Products	1,290	692	253	---	51.6	70.2	----
	* 2879	Pesticides & Agricultural Chemicals, NEC	585	313	82	---	47.4	73.5	----
	* 2893	Printing Ink	546	293	134	---	59.0	78.2	----
	* 2899	Chemicals & Chemical Products, Not Elsewhere Classified	2,058	1,102	320	---	41.9	72.1	----
6	Laundries								
	SIC 7216	Drycleaning Plants, Except Rug Cleaning	26,735	1,717	781	781	62.0	73.8	22,980
	7217	Carpet and Upholstered Cleaning							
	7218	Industrial Launderers							
7	Other Services								
	SIC 7260	Funeral Services & Crematories	32,825	1,718	665	665	47.5	78.5	35,647
	7349	Cleaning & Maintenance Services to Dwellings & Other Buildings, Not Elsewhere Classified							
8	Photography								
	SIC 7332	Blueprinting & Photocopying Services	22,040	2,389	932	932	51.7	71.0	15,526
	7333	Commercial Photography, Art and Graphics							
	7395	Photofinishing Laboratories							
	8411	Museum and Art Galleries							
9	Textile Manufacturing								
	SIC 2230	Broad Woven Fabric Mills, Wool (including Dying and Finishing)	5,492	2,399	699	699	48.6	67.2	3,311
	2250	Knitting Mills							
	2260	Dyeing and Finishing Textiles, Except Wool Fabrics & Knit Goods							
	2270	Floor Covering Mills							

TABLE 1 (continued)

Industry Group No.	Industry Groups and Constituent SIC Codes	SIC Titles	Number of Establishments in the Sampling Frame[1]	Number of Establishments Surveyed	Number of Completed Questionnaires Prior to Validation Survey	Number of Completed Questionnaires After Validation Survey	Response Rate[2] (Percent)	Eligibility Rate[3] (Percent)	Estimated Number of ligible Establishments in the Population[4]
10		Vehicle Maintenance							
	SIC 0722	Crop Harvesting, Primarily by Machine	484,867	2,051	1,303	869	51.2	68.8	366,743
	1600	Construction Other than Building Construction - General Contractors							
	1794	Excavating & Foundation Work							
	4210	Trucking, Local & Long Distance							
	4459	Water Transportation Services, Not Elsewhere Classified							
	5270	Mobile Home Dealers							
	* 5500	Automotive Dealers & Gasoline Service Stations	199,667	794	303	---	51.0	72.2	
	7512	Passenger Car Rental & Leasing, Without Drivers							
	7513	Truck Rental & Leasing, Without Drivers							
	7519	Utility Trailers & Recreational Vehicle Rentals							
	7530	Automotive Repair Shops							
11		Equipment Repair							
	SIC 4610	Pipelines, Except Natural Gas	75,492	1,988	767	762	54.7	69.6	45,363
	4800	Communication							
	5962	Automatic Merchandising Machine Operators							
	7260	Electrical Repair Shops							
	7694	Armature Rewinding Shops							
	7996	Amusement Parks							

TABLE 1 (continued)

Industry Group No.	Industry Groups and Constituent SIC Codes	SIC Titles	Number of Establishments in the Sampling Frame[1]	Number of Establishments Surveyed	Number of Completed Questionnaires Prior to Validation Survey	Number of Completed Questionnaires After Validation Survey	Response Rate[2] (Percent)	Eligibility Rate[3] (Percent)	Estimated Number of Eligible Establishments in the Population[4]
12	Metal Manufacturing								
	SIC 2514	Metal Household Furniture	168,721	2,265	1,287	959	52.7	75.2	118,712
	2522	Metal Office Furniture							
	2542	Metal Partitions, Shelving, Lockers, and Office and Store Fixtures							
	3350	Rolling, Drawing, and Extruding of Non-Ferrous Metals							
	3390	Miscellaneous Primary Metal Products							
	3400	Fabricated Metal Products, Except Machinery and Transportation Equipment (excl. 347, 3482, 3483, 3489)							
	* 3470	Coating, Engraving, and Allied Services	6,006	200	63	---	46.3	67.0	---
	3500	Machinery, Except Electrical							
	3600	Electrical and Electronic Machinery, Equipment & Supplies (excl. 3691,3692)							
	3691	Costume Jewelry & Novelties, Except Precious Metal							
	3692	Primary Batteries, Dry & Wet							
	3714	Motor Vehicle Parts and Accessories							
	3800	Measuring, Analyzing & Controlling Instruments; Photographic, Medical & Optical Goods; Watches & Clocks (excl. 3861)							
	SIC 3964	Needles, Pins, Hooks & Eyes, and Similar Notions							
	3993	Signs and Advertising Displays							
	3995	Burial Caskets							

TABLE 1 (continued)

Industry Group No.	Industry Groups and Constituent SIC Codes	SIC Titles	Number of Establishments in the Sampling Frame[1]	Number of Establishments Surveyed	Number of Completed Questionnaires Prior to Validation Survev	Number of Completed Questionnaires After Validation Survey	Response Rate[2] (Percent)	Eligibility Rate[3] (Percent)	Estimated Number o Eligible Establishmen in the Population[4]
13	Construction								
	SIC 1711	Plumbing, Heating (except Electrical), and Air Conditioning	168,767	1,961	684	433	49.0	69.0	104,018
	1721	Painting, Paper Hanging, and Decorating							
	1743	Terrazzo, Tile, Marble and Mosaic Work							
	1752	Floor Laying & Other Floorwork, Not Elsewhere Classified							
	1761	Roofing and Sheet Metal Work							
	1793	Glass and Glazing Work							
	2451	Mobile Homes							
	2452	Prefabricated Wood Buildings and Components							
	4000	Railroad Transportation							
14	Motor Freight Terminals								
	SIC 4231	Terminal & Joint Terminal Maintenance Facilities for Motor Freight Transportation	1,501	1,446	116	116	60.3	74.7	1,776
15	Furniture/Wood Manufacturing & Refinishing								
	SIC 2434	Wood Kitchen Cabinets	25,032	1,966	687	395	50.8	66.1	14,337
	2435	Hardwood Veneer and Plywood							
	2436	Softwood Veneer and Plywood							
	2492	Particleboard							
	2511	Wood Household Furniture, Except Upholstered							
	2517	Wood Television, Radio, Phonograph, & Sewing Machine Cabinets							
	2519	Household Furniture, Not Elsewhere Classified							
	2521	Wood Office Furniture Lockers, & Office & Store Fixtures							
	7641	Reupholstery and Furniture Repair							

Table 1 (continued)

Industry Group No.	Industry Groups and Constituent SIC Codes SIC Titles	Number of Establishments in the Sampling Frame	Number of Establishments Surveyed	Number of Completed Questionnaires Prior to Validation Survey	Number of Completed Questionnaires After Validation Survey	Response Rate[2] (Percent)	Eligibility Rate[3] (Percent)	Estimated Number of Eligible Establishments in the Population[4]
16	Printing/Ceramics							
	SIC* 2640 Converted Paper & Paperboard Products, Except Containers and Boxes	78,981	2,535	1,274	1,274	56.0	77.4	53,968
	* 2650 Paperboard Containers & Boxes							
	* 2700 Printing, Publishing & Allied Industries	76,803	2,334	1,199		55.8	78.9	
	* 7312 Outdoor Advertising Services							
	3215 Brick & Structural Clay Tile							
	3253 Ceramic Wall and Floor Tile							
	3260 Pottery and Related Products							
17	Cleaning Agents and Cosmetic Manufacturers							
	SIC 2841 Soap and Other Detergents, Except Specialty Cleaners	4,147	2,400	813	607	48.1	70.8	2,789
	2842 Specialty Cleaning, Polishing, and Sanitation Preparations							
	2843 Surface Active Agents, Finishing Agents, Sulfonated Oils and Assistants							
	2844 Perfumes, Cosmetics and Other Toilet Preparations							
18	Other Manufacturing							
	SIC 0724 Cotton Ginning	20,194	4,395	1,614	1,293	48.9	75.2	13,623
	3079 Miscellaneous Plastic Products							
	* 3100 Leather and Leather Products							
	3211 Flat Glass Manufacturing	4,317	559	199	---	51.5	71.6	---
	3291 Abrasive Products							
	3293 Asbestos Products							
19	Paper Industry							
	SIC 2611 Pulp Mills	1,440	1,454	436	436	55.9	77.6	1,154
	2621 Paper Mills, Except Building Paper Mills							
	2631 Paperboard Mills							
	2661 Building Paper and Building Board Mills							

Table 1 (continued)

Industry Group No.	Industry Groups and Constituent SIC Codes SIC Titles	Number of Establishments in the Sampling Frame[1]	Number of Establishments Surveyed	Number of Completed Questionnaires Prior to Validation Survey	Number of Completed Questionnaires After Validation Survey	Response Rate[2] (Percent)	Eligibility Rate[3] (Percent)	Estimated Number of Eligible Establishments in the Population[4]
20	Analytic & Clinical Laboratories							
	SIC 7391 Research & Development Labs	31,156	2,638	1,292	1,292	63.3	74.8	22,261
	7397 Commercial Testing Labs							
	8062 General Medical and Surgical Hospitals							
	SIC 8069 Specialty Hospitals, Except Psychiatric							
	8071 Medical Laboratories							
	8072 Dental Laboratories							
	8220 Colleges, Universities, Professional Schools, & Junior Colleges							
	8922 Noncommercial Educational, Orgs. Scientific and Research Organizations							
21	Educational & Vocational Shops							
	SIC 8221 Elementary & Secondary Schools	107,243	1,591	848	846	60.6	87.8	23,068
	8249 Vocational Schools, Except Vocational High Schools, Not Elsewhere Classified							
	8331 Job Training & Vocational Rehabilitation Services							
22	Wholesale and Retail Sales							
	SIC 5160 Chemicals and Allied Products	83,535	2,642	1,368	1,368	54.5	73.9	67,973
	5191 Farm Supplies							
	5198 Paints, Varnishes & Supplies							
	5230 Paint, Glass & Wallpaper Stores							
	5310 Department Stores							
	TOTAL	1,557,641	50,526	19,052	16,877	52.6	70.3	939,232

Table 2: Targeted Waste Streams by Industry Group

	Pesticide end Users (1)	Pesticide Application Services (2)	Chemical Manufacturers (3)	Wood Preserving (4)	Formulators (5)	Laundries (6)
Arsenic Wastes						
Cyanide Wastes			X		X	
Dry Cleaning Filtration Residues						X
Empty Pesticide Containers	X	X			X	
Heavy Metal Dust			X		X	
Heavy Metal Solutions					X	
Heavy Metal Waste Materials			X			
Ignitable Paint Wastes						
Ignitable Wastes			X		X	
Ink Sludges Containing Chromium or Lead					X	
Mercury Wastes						
Other Reactive Wastes			X		X	
Paint Waste Containing Heavy Metals						
Pesticide Solutions	X	X			X	
Photographic Wastes						
Solvent Still Bottoms			X		X	
Spent Plating Wastes						
Spent Solvents			X		X	
Solutions or Sludges Containing Silver						
Strong Acids or Alkalies			X		X	
Used Lead-Acid Batteries						
Waste Formaldehyde						
Waste Inks Containing Flammable Solvents or Heavy Metals						
Waste Pesticides	X	X			X	
Wastewater Sludges Containing Heavy Metal						
Wastewater Containing Wood Preservatives				X		
Wastes Containing Ammonia						

Table 2: Targeted Waste Streams by Industry Group (continued)

	Other Services (7)	Photography (8)	Textile Manufacturers (9)	Vehicle Maintenance (10)	Equipment Repair (11)	Metal Manufacturing (12)
Arsenic Wastes						
Cyanide Wastes						X
Dry Cleaning Filtration Residues						
Empty Pesticide Containers						
Heavy Metal Dust						
Heavy Metal Solutions						
Heavy Metal Waste Materials						
Ignitable Paint Wastes		X		X	X	X
Ignitable Wastes	X	X		X	X	X
Ink Sludges Containing Chromium or Lead						
Mercury Wastes						
Other Reactive Wastes						X
Paint Waste Containing Heavy Metals		X		X	X	X
Pesticide Solutions						
Photographic Wastes		X				
Solvent Still Bottoms			X			X
Spent Plating Wastes						X
Spent Solvents	X	X	X	X	X	X
Solutions or Sludges Containing Silver		X				
Strong Acids or Alkalies	X	X		X	X	X
Used Lead-Acid Batteries				X		
Waste Formaldehyde						
Waste Inks Containing Flammable Solvents or Heavy Metals						
Waste Pesticides						
Wastewater Containing Heavy Metal Sludges						X
Wastewater Containing Wood Preservatives						
Wastes Containing Ammonia	X					

Table 2: Targeted Waste Streams by Industry Group (continued)

	Construction (13)	Motor Freight Terminals (14)	Furniture Wood Manufacturing and Refinishing (15)	Printing/ Ceramics (16)	Cleaning Agents and Cosmetics Manufacturing (17)	Other Manufacturing (18)
Arsenic Wastes						X
Cyanide Wastes				X		
Dry Cleaning Filtration Residues						
Empty Pesticide Containers						
Heavy Metal Dust					X	X
Heavy Metal Solutions						
Heavy Metal Waste Materials						X
Ignitable Paint Wastes	X	X	X	X		
Ignitable Wastes	X		X	X	X	X
Ink Sludges Containing Chromium or Lead				X		
Mercury Wastes						X
Other Reactive Wastes						
Paint Waste Containing Heavy Metals	X	X		X		
Pesticide Solutions					X	
Photographic Wastes				X		
Solvent Still Bottoms	X		X		X	X
Spent Plating Wastes				X		
Spent Solvents	X	X	X	X	X	X
Solutions or Sludges Containing Silver						
Strong Acids or Alkalies	X	X		X	X	
Used Lead-Acid Batteries		X				
Waste Formaldehyde						
Waste Inks Containing Flammable Solvents or Heavy Metals				X		
Waste Pesticides						
Wastewater Containing Heavy Metal Sludges						
Wastewater Containing Wood Preservatives						
Wastes Containing Ammonia						

Table 2: Targeted Waste Streams by Industry Group (continued)

	Paper Industry (19)	Analytical and Clinical Labs (20)	Educational and Vocational Shops (21)	Wholesale and Retail Sales (22)
Arsenic Wastes				
Cyanide Wastes				
Dry Cleaning Filtration Residues				
Empty Pesticide Containers				
Heavy Metal Dust				
Heavy Metal Solutions				
Heavy Metal Waste Materials				
Ignitable Paint Wastes		X	X	X
Ignitable Wastes	X	X	X	X
Ink Sludges Containing Chromium or Lead				
Mercury Wastes		X		
Other Reactive Wastes		X	X	X
Paint Waste Containing Heavy Metals				
Pesticide Solutions				
Photographic Wastes				
Solvent Still Bottoms	X			
Spent Plating Wastes				
Spent Solvents	X	X	X	X
Solutions or Sludges Containing Silver				
Strong Acids or Alkalies	X	X	X	X
Used Lead-Acid Batteries				
Waste Formaldehyde				
Waste Inks Containing Flammable Solvents or Heavy Metals				
Waste Pesticides				X
Wastewater Containing Heavy Metal Sludges				
Wastewater Containing Wood Preservatives				
Wastes Containing Ammonia				

TABLE 3: Analysis of Secondary SIC Codes by Analogy to Small Quantity Generator Survey Results for Similar Primary Industry Groups

Secondary Standard Industrial Classification		Number of Establishments in the Nation (County Business Patterns, 1982)	Primary Standard Industrial Classification		Percent SQG in Primary	Number of SQG in Secondary	Secondary SIC Waste Quantities	Expected Waste Streams
SIC Code Number	Title		Industry Group #	Title				
0851	Forestry Services	635*	2	Pesticide Application Services	61.4%	391	351	Waste Pesticides Washing and Rinsing Solutions Containing Pesticides Empty Pesticide Containers
0912	Finfish Fishing	762*	10	Vehicle Maintenance (SIC Code 4469, Water Transportation Services, a subgroup of interest)	66.9%	510	958	Strong Acids or Alkalies Ignitable Wastes Spent Solvents Liquid Paint Wastes Lead Acid Batteries
0913	Shellfish Fishing	1032*	10	Vehicle Maintenance (SIC code 4469, Water Transportation services, a subgroup of interest)	66.9%	690	1200	Strong Acids or Alkalies Ignitable Wastes Spent Solvents Liquid Paint Wastes Lead Acid Batteries
0919	Miscellaneous Marine Products	31*	10	Vehicle Maintenance (SIC Code 4469, Water Transportation Services, a subgroup of interest)	66.9%	21	41	Strong Acids or Alkalies Ignitable Wastes Spent Solvents Liquid Paint Wastes Lead Acid Batteries
1500	Building Construction in General Contractors and Operative Builders	112,963	13	Construction	25.4%	28,724	11,542	Strong Acids or Alkalies Ignitable Wastes Spent Solvents Liquid Paint Wastes
1742	Plastering, Drywall, Acoustical and Insulation Work	11,801	13	Construction	25.4%	3,001	1206	Strong Acids or Alkalies Ignitable Wastes Spent Solvents Liquid Paint Wastes
1751	Carpentering	16,697	13	Construction	25.4%	4,246	1,706	Strong Acids or Alkalies Ignitable Wastes Spent Solvents Liquid Paint Wastes

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*Figures unavailable from County Business Patterns, were obtained from Dun and Bradstreet, Dun's Market Identifier File, 1982.

TABLE 3: Analysis of Secondary SIC Codes by Analogy to Small Quantity Generator Survey Results for Similar Primary Industry Groups

Secondary Standard Industrial Classification		Number of Establishments in the Nation (County Business Patterns, 1982)	Primary Standard Industrial Classification		Percent SQG in Primary	Number of SQG in Secondary	Secondary SIC Waste Quantities	Expected Waste Streams
SIC Code Number	Title		Industry Group #	Title				
2499	Wood Products, Not Elsewhere Classified	2,457	15	Furniture/Wood Manufacturing and Refinishing	31.2%	767	846	Ignitable Wastes Spent Solvents
2531	Public Building and Related Furniture	368	12 & 15	Metal Manufacturing and Furniture/Wood Manufacturing and Refinishing	36.1%	133	188	Strong Acids or Alkalies Spent Solvents Solvent Still Bottoms Cyanide Wastes Spent Plating Wastes Waste Water Treatment Sludges with Heavy Metals Ignitable Wastes
2590	Miscellaneous Furniture and Fixtures	1,131	12 & 15	Metal Manufacturing and Furniture Wood Manufacturing and Refinishing	36.1%	408	581	Strong Acids or Alkalies Spent Solvents Solvent Still Bottoms Cyanide Wastes Spent Plating Wastes Waste Water Treatment Sludges with Heavy Metals Ignitable Wastes Wastes Containing Heavy Metals
3999	Miscellaneous Manufacturing Industries--Manufacturing not Elsewhere Classified	2,928	12 & 18	Metal Manufacturing and Other Manufacturing	34.9%	1,023	1,989	Strong Acids or Alkalies Spent Solvents Solvent Still Bottoms Cyanide Wastes Spent Plating Wastes Waste Water Treatment Sludges with Heavy Metals Ignitable Wastes Wastes Containing Heavy Metals
4100	Local and Suburban and Inter-urban Highway Passenger Transportation	12,604	10	Vehicle Maintenance (excluding subgroup of interest SIC Code 4469)	66.9%	8,431	15,872	Strong Acids or Alkalies Spent Solvents Ignitable Wastes Liquid Paint Wastes Lead Acid Batteries

TABLE 3: Analysis of Secondary SIC Codes by Analogy to Small Quantity Generator Survey Results for Similar Primary Industry Groups

Secondary Standard Industrial Classification		Number of Establishments in the Nation (County Business Patterns, 1982)	Primary Standard Industrial Classification		Percent SQG in Primary	Number of SQG in Secondary	Secondary SIC Waste Quantities	Expected Waste Streams
SIC Code Number	Title		Industry Group #	Title				
4300	U.S. Postal Service	231*	10	Vehicle Maintenance (excluding subgroup of interest SIC Code 4469)	66.9%	155	291	Strong Acids or Alkalies Spent Solvents Ignitable Wastes Liquid Paint Wastes Lead Acid Batteries
4463	Marine Cargo Handling	796	10	Vehicle Maintenance (SIC Code 4469, Water Transportation Services, a subgroup of interest)	66.9%	514	968	Strong Acids or Alkalies Spent Solvents Ignitable Wastes Liquid Paint Wastes Lead Acid Batteries
5399	Miscellaneous General Merchandise Stores	15,227	23	Wholesale and Retail Sales	15.9%	2,417	1,632	Waste Pesticides Ignitable Wastes Spent Solvents
5980	Fuel and Ice Dealers	12,615	10	Vehicle Maintenance (excluding subgroup of interest SIC Code 4469)	66.9%	1,452	763	Strong Acids or Alkalies Spent Solvents Ignitable Wastes Liquid Paint Wastes Lead Acid Batteries
7215	Coin-Operated Laundries and Dry Cleaning	11,265	6	Laundries	70.0%	7,883	6,743	Filtration Residues
7331	Direct Mail Advertising Services	1,879	16	Printing/Ceramics (SIC Code 2700, Printing and Publishing, a subgroup of interest)	53.6%	1,007	1,010	Photographic Wastes Strong Acids or Alkalies Spent Solvents Spent Plating Wastes Waste Inks, Containing Flammable Solvents or Heavy Metals Sludges from Ink Formulation Containing Chromium and Lead Cyanide Wastes
7699	Repair Shops and Related Services, Not Elsewhere Classified	20,397	11	Equipment Repair	11.5%	2,348	1,234	Strong Acids or Alkalies Spent Solvents Ignitable Wastes

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*Figures unavailable from County Business Patterns, were obtained from Dun and Bradstreet, Dun's Market Identifiers File, 1982.

TABLE 3: Analysis of Secondary SIC Codes by Analogy to Small Quantity Generator Survey Results for Similar Primary Industry Groups

Secondary Standard Industrial Classification		Number of Establishments in the Nation (County Business Patterns, 1982)	Primary Standard Industrial Classification		Percent SQG in Primary	Number of SQG in Secondary	Secondary SIC Waste Quantities	Expected Waste Streams
SIC Code Number	Title		Industry Group #	Title				
7819	Services Allied to Motion Picture Production	1,675	8	Photography (SIC Code 7333, Commercial Photography, Art, and Graphics, a subgroup of interest)	65.4%	1,095	2,109	Photographic Wastes Spent Solvents Solutions and Sludges Containing Silver
8081	Outpatient Care Facilities	10,028	20	Analytical and Clinical Labs	46.0%	4,610	7,211	Reactive Wastes Strong Acids or Alkalies Spent Solvents Ignitable Wastes
9221	Police Protection	175*	10	Vehicle Maintenance (excluding subgroup of interest SIC Code 4469)	66.9%	118	223	Strong Acids or Alkalies Spent Solvents Ignitable Wastes Liquid Paint Wastes Lead Acid Batteries
9223	Correctional Institutions	329*	21	Educational and Vocational Shops	31.2%	103	36	Reactive Wastes Strong Acids or Alkalies Spent Solvents Ignitable Wastes
9224	Fire Protection	5,059*	10	Vehicle Maintenance (excluding subgroup of interest SIC Code 4469)	66.9%	3,384	6,435	Strong Acids or Alkalies Spent Solvents Ignitable Wastes Liquid Paint Wastes Lead Acid Batteries
9641	Regulation of Agriculture/Marketing and Commodities	159*	20	Analytical and Clinical Labs	46.0%	73	112	Reactive Wastes Strong Acids or Alkalies Spent Solvents Ignitable Wastes

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*Figures unavailable from County Business Patterns, were obtained from Dun and Bradstreet, Dun's Market Identifier File, 1982.

APPENDIX B

Small Quantity Generator Survey Questionnaire

NOTE: This sample questionnaire asks specifically about the generation and management of spent solvents and solvents still bottoms. There were 48 different questionnaires, each asking about the generation and management of a different combination of waste streams.

OMB #20500022
Approval expires 9/30/84

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Dear Survey Participant:

The U.S. Environmental Protection Agency (EPA) is gathering data on the types and amounts of hazardous wastes generated by facilities that produce less than 2,200 lbs. of these wastes per month. Your facility has been selected to participate in this nationwide survey. Although participation in this study is voluntary, we urge you to complete the survey questionnaire within the next 30 days and mail it back to Abt Associates Inc., a private research firm.

Congress is currently considering legislation that will require EPA to regulate establishments that produce small quantities of hazardous waste. Information from this survey will allow EPA to evaluate current waste management practices in developing alternatives for controlling these hazardous wastes. Without your cooperation, it will be difficult for EPA to develop fair and workable regulations.

As you will note from the enclosed letter, trade associations have endorsed the study and are encouraging their membership and other business establishments and organizations to participate.

The information you provide in this questionnaire, and your identity, are strictly confidential. The information will be used for statistical purposes only. We are not interested in your specific facility; rather, we are interested in obtaining a national profile of various industry groups. Even if you believe that your facility produces little or no waste, please go through this survey carefully and answer all applicable questions. If you have any questions regarding this questionnaire, or need assistance in completing your responses, please call Abt Associates toll free at 1-800-626-2630; in Massachusetts, call 1-800-442-2411.

If your facility generated 2,200 lbs. or more of hazardous waste in every month during 1982, do not complete the questionnaire. Simply fill out the enclosed postcard and mail it back to Abt Associates. If your facility generated less than 2,200 lbs. in any month of 1982, fill out the questionnaire even if you already have an EPA identification number.

We appreciate your cooperation in this important survey and look forward to receiving your questionnaire.

Sincerely yours,

John H. Skinner

John H. Skinner, Director
Office of Solid Waste

10

CD 1
11-12/01

SMALL QUANTITY WASTE GENERATOR QUESTIONNAIRE

This questionnaire is designed to obtain information about wastes generated by establishments in the United States. Whether you generate hazardous waste or not, your response is very important. All information will be kept STRICTLY CONFIDENTIAL. The Identification Number on the cover is for Abt Associates' use in sampling and monitoring of survey responses.

For the purposes of completing this questionnaire, the following definitions apply:

- Generate waste — to produce a waste or by-product from a manufacturing or chemical process, or in the performance of a service. This waste may be treated, disposed of, or recycled.
- Facility — a single physical location where business is conducted, or services or industrial operations are performed. However, for responding to questions 1 through 4, in cases of physically dispersed activities, such as construction or janitorial services, facility is defined as the office from which personnel operate. For responding to questions 6 through 22, facility is defined as the site at which the activities (e.g., construction, janitorial services) take place.

1. What type of business or organization are you? What services are delivered or what products are made *at this facility*?

13-16/

2. Is this facility mainly engaged in . . .
CIRCLE ONE NUMBER

Manufacturing 1 17/
Wholesale trade 2
Retail trade 3
Services 4
Other 5

ANSWER QUESTION 3 ONLY IF YOUR FACILITY IS OWNED OR OPERATED BY A GOVERNMENTAL AGENCY OR UNIT.

3. What is the population of the area served by the governmental unit for which this facility is operated?

50,000 or more 1 18
Less than 50,000 2

4. How many employees of this business or organization work at this facility per day?

	Number of Employees	
	Full Time	Part Time
a. On the average for calendar 1982?	______ 19-22	______ 23-26
b. 1982 peak?	______ 27-30	______ 31-34

This survey is concerned with wastes. For the purposes of this survey, wastes include liquids, solids, sludges, or contained gases that are stored, treated, disposed of, or recycled. The specific waste types included in this questionnaire are:

- Spent solvents
- Solvent still bottoms

35-36 16
37 38 18

10

CD 2
11-12/02

SPENT SOLVENTS

5. Does your facility generate any spent solvents that are treated, disposed of, or recycled?

Some examples of this waste type are benzene, chlorobenzenes, toluene, trichloroethylene, perchloroethylene, and methylene chloride.

Yes 1 13/
No (TURN THE PAGE) 2

14-19/B

6. Please estimate the average amount of spent solvents your facility generated per month in 1982.

______ (indicate units in box below)*
20-24/

7. What was the *maximum* amount of spent solvents your facility generated in any month in 1982?

______ (indicate units in box below)*
25-29/

8. For how many months was this maximum amount generated?

______ 30-31/
MONTHS

9. What was the *minimum* amount of spent solvents your facility generated in any month in 1982?

______ (indicate units in box below)*
32-36/

10. For how many months was this minimum amount generated?

______ 37-38/
MONTHS

* INDICATE UNIT OF MEASUREMENT
Pounds 1 39/
Kilograms 2
Gallons 3
Cubic feet 4
55-gallon drums 5
Other (SPECIFY) ______ 6
______ 40-41/

11. For the year 1982, were spent solvents stored at this facility prior to transport, treatment, disposal, or recycling?

Yes 1 42
No (SKIP QUESTIONS 12, 13, 14, AND 15. PROCEED TO QUESTION 16) 2

12. How were the spent solvents stored before removal from your facility? CIRCLE ALL THAT APPLY

Above ground tanks 01 43-44
Below ground tanks 02 45-46
Open metal drums 03 47-48
Closed metal drums 04 49-50
Open fiberboard drums 05 51-52
Closed fiberboard drums 06 53-54
Pails or garbage cans 07
Surface impoundments or lagoons 08
Piles 09
Bulk waste containers such as dumpsters ... 10
Lab packs 11
Other (SPECIFY) ______ 12
55-56
______ 57-58

13. Were any spent solvents stored in an area that is covered or enclosed, such as a shed, building, or railroad car?

Yes 1 59
No 2

14. For the year 1982, please estimate how many days, on average, spent solvents were stored at this facility before being transported, treated, disposed of, or recycled.

______ 60-62
DAYS

15. For the year 1982, please estimate the *longest* time any spent solvents were stored at this facility before being transported, treated, disposed of, or recycled. (Exclude any wastes generated before 1982.)

______ 63-65
DAYS

16. Were spent solvents routinely mixed with other types of waste before being transported, treated, disposed of, or recycled.

Yes, with other wastes covered in this questionnaire (SEE BOX ON BOTTOM OF PAGE ONE) 1 66
Yes, with other wastes 2
No 3

CD 3
11-12/83

17. Please indicate how the spent solvents were treated, disposed of, recycled, or otherwise handled and whether it was done on or off the premises where the waste was generated. CIRCLE ALL THAT APPLY

	On the premises	Off the premises	
Hazardous waste landfill	1	2	13/
Solid waste landfill	1	2	14/
Hazardous waste incinerator	1	2	15/
Solid waste incinerator	1	2	16/
Public sewage system	1	2	17/
Private septic tank/leaching field	1	2	18/
Treated, e.g., neutralized, filtered, or evaporated (SPECIFY TYPE OF TREATMENT) ______	1	2	19/ 20-21/
______	1	2	22/ 23-24/
______	1	2	25/ 26-27/
Recycled (ANSWER A)	1	2	28/
Other (SPECIFY) ______	1	2	29/ 30-31/
______	1	2	32/ 33-34/
Don't know	—	8	35/

IF RECYCLED:

A. Please indicate types of waste management used and whether they were done on or off the premises where the waste was generated.
CIRCLE ALL THAT APPLY

	On the premises	Off the premises	
Used or reused as a substitute for new materials with little or no processing	1	2	36/
Reclaimed or reprocessed	1	2	37/
Blended to produce a fuel	1	2	38/
Burned as fuel	1	2	39/
Applied directly to the land as dust suppressants or as fertilizer	1	2	40/
Other (SPECIFY) ______	1	2	41/ 42-43/
______	1	2	44/ 45-46/
Don't know	—	8	47/

18. How often are spent solvents usually picked up for treatment, disposal, or recycling?

Never—this type of waste is entirely treated, disposed of, or recycled at this facility (GO TO NEXT PAGE)	01	48-49/
Every day	02	
Two to four times a week	03	
Once a week	04	
Less often than once a week but at least once a month	05	
Between once a month and every three months	06	
Other (SPECIFY) ______	07	
______		

19. How were spent solvents transported from your facility? CIRCLE ALL THAT APPLY

Public (city, town, etc.) waste collection truck including public contractors	1	50
Waste collection truck contracted by your organization	2	51/
Truck(s) owned by your organization	3	52
Other (SPECIFY) ______	4	53/ 54-55
______		56-57/

20. To the best of your knowledge, did the transporter know that spent solvents were included in the shipment?

Yes (ANSWER A)	1	58
No	2	
Don't know	8	

IF YES:

A. How was the transporter notified? CIRCLE ALL THAT APPLY

EPA Hazardous Waste Manifest	1	59/
Department of Transportation Shipping Paper	2	60
Other type of manifest	3	61/
The containers were labelled	4	62/
The transporter was notified verbally	5	63
The transporter was notified in writing	6	64/

21. To the best of your knowledge, did the treatment, disposal, or recycling facility operators know that they were receiving spent solvents?

Yes (ANSWER A)	1	65
No	2	
Don't know	8	

IF YES:

A. How were the treatment, disposal, or recycling facility operators notified that they were receiving this type of waste? CIRCLE ALL THAT APPLY

EPA Hazardous Waste Manifest	1	66
Department of Transportation Shipping Paper	2	67/
Other type of manifest	3	68/
The containers were labelled	4	69
The disposal facility operators were notified verbally	5	70
The disposal facility operators were notified in writing	6	71/

78-80/182

CD 4
11-12/04

SOLVENT STILL BOTTOMS

5. Does your facility generate any solvent still bottoms that are treated, disposed of, or recycled?

Solvent still bottoms are generated from the distillation of spent solvents such as, benzene, chlorobenzenes, toluene, trichloroethylene, perchloroethylene and methylene chloride.

Yes..1 13/
No (TURN THE PAGE)........................2

14-19/B

6. Please estimate the average amount of solvent still bottoms your facility generated per month in 1982.

______ 20-24/ (indicate units in box below)*

7. What was the *maximum* amount of solvent still bottoms your facility generated in any month in 1982?

______ 25-29/ (indicate units in box below)*

8. For how many months was this maximum amount generated?

______ MONTHS 30-31/

9. What was the *minimum* amount of solvent still bottoms your facility generated in any month in 1982?

______ 32-36/ (indicate units in box below)*

10. For how many months was this minimum amount generated?

______ MONTHS 37-38/

* INDICATE UNIT OF MEASUREMENT
Pounds....................................1 39/
Kilograms.................................2
Gallons...................................3
Cubic feet................................4
55-gallon drums...........................5
Other (SPECIFY) ____________6
____________________ 40-41/

11. For the year 1982, were solvent still bottoms stored at this facility prior to transport, treatment, disposal, or recycling?

Yes..1 42
No (SKIP QUESTIONS 12, 13, 14, AND 15. PROCEED TO QUESTION 16)..................2

12. How were the solvent still bottoms stored before removal from your facility? CIRCLE ALL THAT APPLY

Above ground tanks........................01 43-44
Below ground tanks........................02 45-46
Open metal drums..........................03 47-48
Closed metal drums........................04 49-50
Open fiberboard drums.....................05 51-52
Closed fiberboard drums...................06 53-54
Pails or garbage cans.....................07
Surface impoundments or lagoons...........08
Piles.....................................09
Bulk waste containers such as dumpsters.....10
Lab packs.................................11
Other (SPECIFY) ____________12
55-56
____________________ 57-58

13. Were any solvent still bottoms stored in an area that is covered or enclosed, such as a shed, building, or railroad car?

Yes..1 59
No...2

14. For the year 1982, please estimate how many days, on average, solvent still bottoms were stored at this facility before being transported, treated, disposed of, or recycled.

______ DAYS 60-62

15. For the year 1982, please estimate the *longest* time any solvent still bottoms were stored at this facility before being transported, treated, disposed of, or recycled. (Exclude any wastes generated before 1982.)

______ DAYS 63-65

16. Were solvent still bottoms routinely mixed with other types of waste before being transported, treated, disposed of, or recycled.

Yes, with other wastes covered in this questionnaire (SEE BOX ON BOTTOM OF PAGE ONE)..........................1 66
Yes, with other wastes.....................2
No...3

78-80 181

CD 5
11-12/06

17. Please indicate how the solvent still bottoms were treated, disposed of, recycled, or otherwise handled and whether it was done on or off the premises where the waste was generated. CIRCLE ALL THAT APPLY

	On the premises	Off the premises	
Hazardous waste landfill	1	2	13/
Solid waste landfill	1	2	14/
Hazardous waste incinerator	1	2	15/
Solid waste incinerator	1	2	16/
Public sewage system	1	2	17/
Private septic tank/leaching field	1	2	18/
Treated, e.g., neutralized, filtered, or evaporated (SPECIFY TYPE OF TREATMENT) ________	1	2	19/ 20-21/
________	1	2	22/ 23-24/
________	1	2	25/ 26-27/
Recycled (ANSWER A)	1	2	28/
Other (SPECIFY) ________	1	2	29/ 30-31/
________	1	2	32/ 33-34/
Don't know	—	8	35/

IF RECYCLED:

A. Please indicate types of waste management used and whether they were done on or off the premises where the waste was generated. CIRCLE ALL THAT APPLY

	On the premises	Off the premises	
Used or reused as a substitute for new materials with little or no processing	1	2	36/
Reclaimed or reprocessed	1	2	37/
Blended to produce a fuel	1	2	38/
Burned as fuel	1	2	39/
Applied directly to the land as dust suppressants or as fertilizer	1	2	40/
Other (SPECIFY) ________	1	2	41/ 42-43/
________	1	2	44/ 45-46/
Don't know	—	8	47/

18. How often are solvent still bottoms usually picked up for treatment, disposal, or recycling?

Never—this type of waste is entirely treated, disposed of, or recycled at this facility (GO TO NEXT PAGE)	01	48-49/
Every day	02	
Two to four times a week	03	
Once a week	04	
Less often than once a week but at least once a month	05	
Between once a month and every three months	06	
Other (SPECIFY) ________	07	
________		

19. How were solvent still bottoms transported from your facility? CIRCLE ALL THAT APPLY

Public (city, town, etc.) waste collection truck including public contractors	1	50
Waste collection truck contracted by your organization	2	51
Truck(s) owned by your organization	3	52
Other (SPECIFY) ________	4	53 54-55
________		56-57

20. To the best of your knowledge, did the transporter know that solvent still bottoms were included in the shipment?

Yes (ANSWER A)	1	58
No	2	
Don't know	8	

IF YES:

A. How was the transporter notified? CIRCLE ALL THAT APPLY

EPA Hazardous Waste Manifest	1	59
Department of Transportation Shipping Paper	2	60
Other type of manifest	3	61
The containers were labelled	4	62
The transporter was notified verbally	5	63
The transporter was notified in writing	6	64

21. To the best of your knowledge, did the treatment, disposal, or recycling facility operators know that they were receiving solvent still bottoms?

Yes (ANSWER A)	1	65
No	2	
Don't know	8	

IF YES:

A. How were the treatment, disposal, or recycling facility operators notified that they were receiving this type of waste? CIRCLE ALL THAT APPLY

EPA Hazardous Waste Manifest	1	66
Department of Transportation Shipping Paper	2	67
Other type of manifest	3	68
The containers were labelled	4	69/
The disposal facility operators were notified verbally	5	70/
The disposal facility operators were notified in writing	6	71/

CD 6
11-12/06

OTHER WASTES

22. Now that you have completed the questions regarding the specific types of wastes asked for on the previous pages, please tell us about other wastes you might generate. Please circle below any *additional* wastes your facility generates including liquids, solids, sludges, or contained gases.

A. Pesticides – Some examples are parathion, toxaphene, dieldrin, carbamates, 2,4-D, and DDT.

Waste pesticides	01
Washing and rinsing solutions containing pesticides	02
Empty pesticide containers	03
Spent toxaphene solutions or sludges from dipping	04
Spent pesticide solutions or sludges other than toxaphene from dipping	05

B. Heavy metals – Wastes containing arsenic, barium, cadmium, chromium, lead, mercury, selenium, or silver.

Dusts containing heavy metals	06
Washing and rinsing solutions containing heavy metals	07
Wastewater treatment sludges containing heavy metals	08
Waste materials containing heavy metals	09

C. Ink wastes

Waste inks containing flammable solvents or heavy metals (barium, cadmium, chromium, or lead)	10
Sludges from ink formulation that contain chromium or lead	11

D. Paint wastes

Ignitable paint wastes containing flammable solvents (flash point less than 140°F)	12
Liquid paint wastes containing heavy metals (cadmium, chromium, mercury, or lead)	13

E. Solvents – Some examples are benzene, chlorobenzenes, toluene, trichloroethylene, perchloroethylene, and methylene chloride plus the still bottoms from the recovery of these solvents.

Spent solvents	14
Solvent still bottoms	15
Filtration residues from dry cleaning operations	16

F. Reactive wastes – For example, cyanides (soluble cyanide salts), strong acids (hydrogen fluoride, sulfuric acid) or alkalis (sodium hydroxide) and spent plating wastes.

Cyanide wastes	17
Strongly acidic or alkaline wastes	18
Spent plating wastes	19
Wastes containing ammonia	20
Other	21

G. Ignitable wastes (other than solvents, solvent still bottoms, or ignitable paint wastes) – for example, adhesives and epoxy resins.

Ignitable wastes (flash point less than 140°F)	22

H. Photographic wastes

Photographic wastes	23
Solutions or sludges containing silver from photographic processes	24

I. Wood Preservatives

Wastewater treatment sludges containing pentachlorophenol, creosote or arsenic	25

J. Waste formaldehyde

Waste formaldehyde	26

K. Used lead-acid batteries

Used lead-acid batteries	27

13-14
15 16
17-18
19 20

L. Other (SPECIFY)

21 22
23-24
_______________________ 25 26
27 28
_______________________ 29 30
_______________________ 31 32

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78-80-400

CONFIDENTIAL INFORMATION

We are requesting your name, address, and telephone number so that someone from Abt Associates may contact you if clarification of your survey responses is needed; however, it should be noted that your responses to this questionnaire are *strictly confidential*. This page is detachable in order to assure that you or your facility will not be identified should EPA or any state, local, or federal enforcement official request copies of the actual completed survey questionnaire. Abt Associates is contractually obligated to remove and destroy this page once all the information required for the survey has been obtained.

Name ____________________

Title ____________________

Telephone Number ____________________

IF YOU HAVE ANY QUESTIONS ABOUT THIS SURVEY,
PLEASE CALL ABT ASSOCIATES TOLL FREE AT
1-800-626-2630
(IN MASSACHUSETTS CALL 1-800-442-2411)

Thank you for your cooperation. Please return the completed questionnaire in the enclosed, stamped, self-addressed envelope to:

Abt Associates Inc.
SRG Data Receipt
55 Wheeler Street
Cambridge, MA 02138

APPENDIX C

Standard Error Formula

Standard Error Formula

Standard Error of an Estimated Total

$$\sqrt{\sum_{h=1}^{H} \frac{n_h}{n_h - 1} \left(\sum_{i=1}^{n_h} W_{hi}^2 \quad X_{hi}^2 \quad - \frac{\left(\sum_{i=1}^{n_h} W_{hi} \; X_{hi} \right)^2}{n_h} \right)}$$

where h designates sample stratum, and

W_{hi} = weight of i-th sample establishment in h-th stratum

X_{hi} = value for variable X for the i-th sample establishment in the h-th stratum.

n_h = the sample size of establishments in the h-th stratum.

APPENDIX D

Detailed Industry Profiles of Waste Generation and Management Practices

Industry Profiles

The tables in this appendix present a detailed picture of the waste generation and management practices for each of the 22 surveyed industry groups. The estimates presented are based only on waste quantities and management practices reported for targeted waste streams because these data provide the most reliable source for the estimates.

Supplemental general information is available from the secondary industries which were analyzed by analogy to surveyed industries, and from generators that reported producing additional, non-targeted waste streams, but these data do not contain specific waste quantity or management information. Extrapolated estimates for numbers of generators and waste quantities for secondary industries is presented in Appendix A, Table 3. The non-targeted waste stream data do not contain specific waste quantity or management information, and are therefore not included here.

The table on page D-3 is a summary of the number of small quantity generators and total annual waste quantity generated by industry group. Following this table are three tables for each industry group. The first table presents a breakdown of the quantity of hazardous waste generated by waste stream. The second and third tables profile the on- and off-site management practices by number of establishments and quantity of waste in the industry group.

Ninety percent confidence limits for estimates of the total number of generators and total waste quantity appear in parentheses below the estimates. The estimates of percent of small quantity generators and waste quantity by management practice are intended to reflect general trends for each waste stream. Approximate 90 percent confidence limits can be calculated for the total number of small quantity generators using a certain on- or off-site management practice from the following equation:

$$\text{90 percent confidence limit} = \pm\ 1.65 \sqrt{\frac{p(100-p)}{n}}$$

where p is the percentage of small quantity generators using the practice of interest and n is the unweighted number of responses the estimate is based on. The number of responses is provided as a footnote to each on- or off-site management table. The confidence limits for the total quantity of waste managed by a certain method cannot be readily calculated, but they are generally larger due to the variability in waste quantity reported.

For some industry groups, the percentages which describe the management practices within an industry group by either the number of generators or waste quantity generated sum to more than 100 percent. This is the result of double counting. Waste streams that were managed by several methods, such as stored in both dumpsters and closed metal drums, or treated and then sent to a solid waste facility are counted in more than one category. Generators producing such waste streams, or producing several waste streams which were managed differently would also be counted in more than one category. Double counting is highest in the reporting of storage and transporter notification methods with a maximum of 19 percent of the generators and 26 percent of the waste being counted in more than one category. For the remaining management information reported, less than 5 percent of the generators and waste quantities are counted in more than one category.

NUMBER OF SMALL QUANTITY GENERATORS BY INDUSTRY GROUP AND QUANTITY OF WASTE GENERATED[1]

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Percent of Generators	Number of Generators	Percent of Generators	Number of Generators	Percent of Generators	Number of Generators	Waste Quantity (MT/yr)
Pesticide End Users	1,200	74	192	12	231	14	1,623	1,122
Pesticide-Application Services	5,598	59	2,188	23	1,660	18	9,444	8,444
Chemical Manufacturing	189	25	173	23	391	52	753	2,373
Wood Preserving	52	27	34	18	107	55	193	715
Formulators	275	31	232	26	395	43	902	2,333
Laundries	6,693	43	6,438	41	2,515	16	15,646	13,418
Other Services	9,297	57	4,616	28	2,409	15	16,322	10,706
Photography	4,115	44	2,423	26	2817	30	9,355	18,052
Textile Manufacturing	103	38	46	17	124	46	272	650
Vehicle Maintenance	46,391	21	95,714	43	82,528	37	224,632	427,287
Equipment Repair	1,149	64	377	21	269	15	1,795	943
Metal Manufacturing	18,955	51	7,290	20	11,076	30	37,320	64,652
Construction	9,021	71	2,540	20	1,117	9	12,677	5,033
Motor Freight Terminals	39	26	64	43	45	30	148	161
Furniture/Wood Manufacture and Refinishing	2,141	64	635	19	579	17	3,355	3,703
Printing/Ceramics	15,392	63	5,787	24	3,420	14	24,640	18,307
Cleaning Agents and Cosmetic Manufacturing	143	26	134	25	265	49	543	1,569
Other Manufacturing	1,037	40	581	23	946	37	2,564	5,361
Paper Industry	42	23	56	31	83	46	181	544
Analytical and Clinical Laboratories	3,574	56	1,549	24	1,286	20	6,409	7,171
Educational and Vocational Establishments	3,043	87	196	6	241	7	3,481	1,179
Wholesale and Retail Establishments	4,300	75	856	15	575	10	5,731	3,876
TOTAL	132,762	35	132,133	35	113,086	30	377,981	597,625

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[1] Estimates based on Small Quantity Generator Survey results.

PESTICIDE END USERS [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	1,200	86	192	118	231	918	1,623	1,122
WASTE STREAM GENERATED								
Empty Pesticide Containers	1,171	62	180	39	225	184	1,576	285
Pesticide Solutions	207	18	135	67	191	689	533	776
Waste Pesticides	110	3	67	4	44	45	220	52
Other	12	3	12	8	0	0	23	11

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF PESTICIDE END USERS[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	1,200	86	192	118	231	918	1,623 (± 108)	1,122 (± 284)
Number of Small Quantity Generators Managing Waste On-Site	505	41	134	81	202	751	842[a] (± 79)	874 (± 258)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Bulk Waste Container	12	8	9	1	14	3	12	3
Pails/Garbage Cans	8	3	11	1	16	4	10	4
Piles	15	10	8	1	0	0	10	1
Closed Metal Drums	2	2	13	2	3	2	4	2
Generators Storing for ≤ 180 Days	99	100	97	98	97	97	98	97
Average Duration of Storage (Days):								
0 - 7	82	89	84	85	92	92	85	91
8 - 90	12	7	4	6	5	4	9	5
91 - 180	5	4	9	8	0	0	4	1
>180	1	<1	3	2	3	4	2	3
TREATMENT/RECYCLING								
Generators Treating	33	32	45	36	33	33	35	33
Treatment Methods:								
Triple Rinsing	20	18	4	<1	11	18	16	16
Neutralization	6	6	9	9	11	7	8	7
Other Physical Treatment	2	2	4	<1	10	2	5	2
Thermal Treatment	3	3	11	5	0	0	4	1
Generators Recycling	29	34	55	42	56	62	40	58
Recycling Methods:								
Reused	20	26	46	36	39	48	29	46
Applied to Land	8	5	9	5	14	12	10	11
Reclaimed	2	4	4	<1	6	2	3	2
DISPOSAL								
Generators Disposing On-Site	68	50	67	32	56	28	65	30
Disposal Methods:								
Solid Waste Incinerator	29	26	30	16	11	3	25	5
Solid Waste Landfill	14	9	21	3	28	8	18	8
Sewer System	13	9	4	<1	5	7	10	6
Septic Tank	2	3	17	13	14	8	8	8

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 145.

PROFILE OF PESTICIDE END USERS[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	1,200	86	192	118	231	918	1,623 (± 108)	1,122 (± 284)
Number of Small Quantity Generators Shipping Waste Off-Site	873	48	124	37	154	175	1,150[a] (± 105)	259 (± 72)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Bulk Waste Container	39	37	36	41	56	46	41	43
Pails/Garbage Cans	10	8	22	12	18	18	12	15
Closed Metal Drums	6	5	9	10	8	14	7	12
Piles	6	4	5	1	0	0	5	1
Open Metal Drums	3	3	17	6	0	0	4	1
Generators Storing for ≤ 180 Days	98	96	100	100	93	91	97	94
Average Duration: of Storage (Days):								
0 - 7	87	85	78	78	89	78	87	79
8 - 90	10	10	8	1	4	14	9	11
91 - 180	1	2	14	21	0	0	2	3
>180	2	4	0	0	7	9	3	6
TRANSPORT								
Generators Notifying Transporters	39	38	45	25	22	3	38	13
Notification Methods:								
Labeled Containers	20	18	23	18	11	1	19	7
Other	23	26	26	17	15	3	23	9
Transport Methods:								
Public Truck	44	39	50	45	34	53	43	49
Contracted Truck	33	31	26	23	48	28	34	28
Company Truck	18	22	33	34	11	2	18	10
Other	13	13	0	0	8	17	11	14
Destination:								
Solid Waste Landfill	68	65	81	60	70	62	70	62
Solid Waste Incinerator	7	7	5	1	11	6	7	5
Subtitle C Landfill	6	7	9	19	11	13	7	13
Recycling Facility	3	6	9	21	0	0	3	4
Unknown	19	18	0	0	19	19	17	16

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 151.

PESTICIDE APPLICATION SERVICES [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	5,596	513	2,188	1,480	1,660	6,451	9,444	8,444
WASTE STREAM GENERATED								
Empty Pesticide Containers	5,210	360	2,132	559	1,529	2,017	8,871	2,935
Pesticide Solutions	895	96	1,540	784	1,287	3,753	3,723	4,633
Waste Pesticides	790	25	31	137	35	647	2,274	809
Other	138	32	4	<1	5	35	142	67

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF PESTICIDE APPLICATION SERVICES[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	5,596	513	2,188	1,480	1,660	6,451	9,444 (± 476)	8,444 (± 1,346)
Number of Small Quantity Generators Managing Waste On-Site	2,392	221	1,493	857	1,378	4,125	5,263[a] (± 418)	5,203 (± 1,114)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Closed Metal Drums	9	10	19	21	20	10	15	12
Pails/Garbage Cans	8	6	17	11	10	5	11	6
Piles	15	15	7	2	8	2	11	2
Bulk Waste Container	8	12	8	4	11	4	9	5
Above Ground Tanks	2	2	4	2	10	9	5	8
Generators Storing for ≤ 180 Days	96	94	92	92	98	100	95	98
Average Duration of Storage (Days):								
0 - 7	67	70	68	62	77	74	70	72
8 - 90	29	24	21	27	19	25	24	25
91 - 180	0	0	4	3	2	1	2	1
>180	4	7	8	8	2	<1	5	2
TREATMENT/RECYCLING								
Generators Treating	43	35	32	18	41	29	40	27
Treatment Methods:								
Triple Rinsing	35	30	25	14	22	9	29	11
Neutralilization	1	<1	2	2	11	6	4	5
Thermal Treatment	5	2	4	2	2	<1	4	1
Generators Recycling	32	36	64	64	65	57	50	57
Recycling Methods:								
Reused	29	32	59	60	56	46	44	47
Applied to Land	7	8	0	0	8	6	5	5
Reclaimed	4	1	4	5	5	4	5	4
DISPOSAL								
Generators Disposing On-Site	48	39	40	23	39	26	43	26
Disposal Methods:								
Sewer System	15	12	11	7	14	13	14	12
Septic Tank	7	4	9	6	17	9	10	9
Solid Waste Landfill	12	10	8	3	8	5	10	5
Solid Waste Incinerator	7	5	2	3	5	<1	5	1

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 176.

PROFILE OF PESTICIDE APPLICATION SERVICES[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	5,596	513	2,188	1,480	1,660	6,451	9,444 (± 476)	8,444 (± 1,346)
Number of Small Quantity Generators Shipping Waste Off-Site	4,320	319	1,763	689	1,394	2,994	7,477[a] (± 352)	4,002 (± 886)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Closed Metal Drums	11	9	29	25	31	26	19	24
Bulk Waste Container	14	15	20	21	24	13	17	14
Pails/Garbage Cans	16	11	16	11	18	17	16	16
Piles	12	10	14	9	23	16	14	14
Open Metal Drums	3	2	5	2	12	5	5	4
Above Ground Tanks	1	2	2	<1	10	5	3	4
Generators Storing for ≤ 180 Days	94	96	95	96	98	96	95	96
Average Duration of Storage (Days):								
0 - 7	67	72	59	60	53	53	62	60
8 - 90	24	21	29	20	39	31	29	28
91 - 180	4	3	8	16	6	11	5	11
>180	6	4	5	4	2	4	5	4
TRANSPORT								
Generators Notifying Transporters	70	72	68	49	80	59	71	58
Notification Methods:								
Labeled Containers	34	30	43	24	53	33	40	31
Other	54	57	45	34	56	38	52	39
Transport Methods:								
Company Truck	52	54	42	33	54	54	50	50
Public Truck	34	34	36	25	30	18	34	21
Contracted Truck	16	12	27	23	36	13	22	15
Other	10	8	21	26	14	18	13	19
Destination:								
Solid Waste Landfill	68	60	70	53	61	48	67	50
Recycling Facility	15	22	30	34	39	38	23	36
Subtitle C Landfill	13	10	16	9	29	26	17	21
Unknown	7	9	6	6	6	6	7	6

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 190.

CHEMICAL MANUFACTURING [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	189	20	173	131	391	2,223	753	2,373
WASTE STREAM GENERATED								
Cyanide Wastes	3	<1	2	1	3	<1	8	1
Heavy Metal Dust	19	1	10	9	5	61	35	70
Heavy Metal Waste Materials	14	1	11	3	21	121	46	124
Ignitable Wastes	28	3	44	18	118	405	190	426
Other Reactive Wastes	3	<1	8	3	19	30	30	33
Solvent Still Bottoms	3	<1	13	1	22	50	38	51
Spent Solvents	71	9	114	72	245	1,063	430	1,144
Strong Acids or Alkalies	66	6	36	21	96	446	197	473
Other	0	0	5	2	11	48	16	50

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF CHEMICAL MANUFACTURING[1] ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	189	20	173	131	391	2,223	753 (± 68)	2,373 (± 285)
Number of Small Quantity Generators Managing Waste On-Site	119	12	92	56	162	832	373[a] (± 37)	901 (± 176)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	26	31	32	41	44	37	35	38
Above Ground Tanks	10	14	3	4	14	18	10	17
Open Metal Drums	7	11	12	9	2	3	6	3
Closed Fiberboard Drums	7	5	3	1	7	10	6	10
Pails/Garbage Cans	2	<1	9	8	4	1	5	1
Bulk Waste Container	2	1	3	3	5	8	4	7
Generators Storing for ≤ 180 Days	81	87	88	90	93	94	88	94
Average Duration of Storage (Days):								
0 - 7	61	60	54	56	46	42	53	43
8 - 90	16	18	34	35	37	41	30	41
91 - 180	5	10	0	0	10	11	6	10
>180	19	13	12	10	7	6	12	6
TREATMENT/RECYCLING								
Generators Treating	49	43	51	38	48	51	49	50
Treatment Methods:								
Neutralization	25	18	27	20	29	27	28	27
Evaporation	28	23	30	18	12	15	21	15
Generators Recycling	31	39	46	50	43	41	40	42
Recycling Methods:								
Reused	23	33	34	35	31	29	29	29
Reclaimed	7	3	17	17	21	21	15	21
Burned as a Fuel	3	4	0	0	5	4	3	4
DISPOSAL								
Generators Disposing On-Site	46	41	31	32	44	39	42	39
Disposal Methods:								
Sewer System	23	16	16	15	17	19	19	19
Septic Tank	12	13	0	0	8	9	7	8
Solid Waste Incinerator	2	4	6	5	4	4	4	4

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 118.

PROFILE OF CHEMICAL MANUFACTURING[1]
OFF-SITE MANAGEMENT

	Generators of <25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of >100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	189	20	173	131	391	2,223	753 (± 68)	2,373 (± 285)
Number of Small Quantity Generators Shipping Waste Off-Site	92	9	116	84	278	1,578	486[a] (± 37)	1,672 (± 242)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	38	53	70	71	77	71	68	71
Bulk Waste Containers	9	4	12	10	5	4	7	5
Above Ground Tanks	3	5	2	3	7	8	5	8
Pails/Garbage Cans	3	<1	7	2	4	2	5	2
Generators Storing for ≤ 180 Days	85	84	85	83	87	90	86	90
Average Duration of Storage (Days):								
0 - 7	47	42	17	16	12	12	20	12
8 - 90	23	25	50	47	57	64	39	63
91 - 180	14	16	19	20	18	14	18	15
>180	15	16	15	17	13	10	14	10
TRANSPORT								
Generators Notifying Transporters	74	83	86	85	92	95	87	94
Notification Methods:								
Labeled Containers	32	27	36	36	67	64	58	64
EPA Manifest	27	22	46	50	66	72	54	70
DOT Shipping Papers	6	12	12	14	23	25	17	25
Other	59	72	65	64	69	72	66	67
Transport Methods:								
Contracted Truck	74	89	79	76	83	87	80	86
Public Truck	15	6	7	6	8	7	9	6
Company Truck	6	4	12	11	3	1	6	1
Other	9	3	10	9	16	9	13	9
Destination:								
Recycling Facility	21	34	32	33	38	43	33	43
Subtitle C Landfill	30	28	23	23	36	32	32	32
Solid Waste Landfill	39	28	30	29	13	8	22	10
Subtitle C Incinerator	0	0	7	6	27	27	17	26
Solid Waste Incinerator	9	11	9	9	6	5	7	5
Treatment Facility	6	10	7	8	5	3	6	3
Unknown	6	5	5	3	8	4	7	4

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity c waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 160.

WOOD PRESERVING [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	52	6	34	21	107	688	193	715
WASTE STREAM GENERATED								
Waste Water Containing Wood Preservatives	52	6	34	21	107	688	193	715

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF WOOD PRESERVING[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	52	6	34	21	107	688	193 (± 23)	715 (± 141)
Number of Small Quantity Generators Managing Waste On-Site	36	4	21	13	56	307	113[a] (± 16)	323 (± 86)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Surface Impoundment	45	55	32	49	63	61	52	60
Closed Metal Drums	27	21	19	12	26	27	25	27
Above Ground Tanks	5	8	19	18	18	19	14	19
Below Ground Tanks	6	<1	19	12	4	2	7	2
Generators Storing for ≤ 180 Days	38	29	49	51	41	39	42	39
Average Duration of Storage (Days):								
0 - 7	27	24	30	20	11	7	20	8
8 - 90	11	5	19	30	12	26	18	26
91 - 180	0	0	0	0	8	6	4	5
>180	62	71	51	50	59	62	59	61
TREATMENT/RECYCLING								
Generators Treating	23	30	31	34	36	34	31	34
Treatment Methods:								
Evaporation	23	30	10	18	14	16	16	17
Biological Treatment	0	0	10	6	7	5	5	5
Do Not Know	0	0	0	0	11	12	6	11
Generators Recycling	49	44	29	24	45	41	43	40
Recycling Methods:								
Reused	33	38	19	19	22	15	25	16
Reclaimed	16	6	10	5	31	23	22	22
Burned as a Fuel	0	0	0	0	11	13	5	12
DISPOSAL								
Generators Disposing On-Site	44	48	60	66	60	58	55	58
Disposal Methods:								
Septic Tank	11	20	19	15	7	12	11	13
Sewer System	0	0	0	0	15	11	7	10

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 55.

PROFILE OF WOOD PRESERVING[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	52	6	34	21	107	688	193 (± 23)	715 (± 141)
Number of Small Quantity Generators Shipping Waste Off-Site	18	2	17	10	55	408	90[a] (± 16)	420 (± 112)
STORAGE				—PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	56	41	61	53	75	70	68	70
Above Ground Tanks	11	32	12	11	11	11	11	11
Generators Storing for ≤ 180 Days	44	59	76	75	85	77	75	77
Average Duration of Storage (Days):								
0 - 7	33	28	26	38	8	9	16	10
8 - 90	11	32	35	27	66	55	49	54
91 - 180	0	0	14	10	12	14	10	14
>180	56	41	24	25	15	23	25	23
TRANSPORT								
Generators Notifying Transporters	67	64	100	100	93	87	89	88
Notification Methods:								
EPA Manifest	22	22	38	34	86	80	64	79
Labeled Containers	33	31	61	53	66	61	59	60
DOT Shipping Paper	0	0	38	37	22	21	21	21
Other	67	64	100	100	70	62	75	63
Transport Methods:								
Contracted Truck	45	26	76	81	85	82	76	82
Company Truck	11	1	12	12	4	1	7	1
Public Truck	11	32	0	0	4	4	5	4
Other	33	42	12	8	11	14	15	14
Destination:								
Subtitle C Landfill	22	55	63	72	86	82	69	82
Recycling Facility	22	22	36	36	15	17	20	17
Solid Waste Landfill	34	5	24	20	4	3	13	3
Unknown	11	9	12	8	4	1	7	2

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 43.

FORMULATORS [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	275	31	232	158	395	2,145	902	2,333
WASTE STREAM GENERATED								
Cyanide Wastes	10	1	17	3	2	2	28	6
Empty Pesticide Containers	45	5	40	18	28	27	113	50
Heavy Metal Dust	4	<1	4	<1	30	85	38	85
Heavy Metal Solutions	7	<1	8	6	30	52	45	58
Ignitable Wastes	25	3	30	13	81	325	135	341
Ink Sludges Containing Chromium or Lead	8	1	18	6	32	71	58	78
Other Reactive Wastes	0	0	0	0	13	69	13	69
Pesticide Solutions	10	1	12	2	20	38	42	41
Spent Solvents	166	17	122	76	271	1,134	559	1,227
Strong Acids or Alkalies	22	2	51	27	59	296	132	325
Waste Pesticides	13	<1	20	2	13	30	46	32
Other	2	<1	10	4	10	17	22	21

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF FORMULATORS[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	275	31	232	158	395	2,145	902 (± 81)	2,333 (± 292)
Number of SQGs Managing Waste On-Site	135	13	133	80	181	696	448[a] (± 48)	790 (± 149)
				—PERCENT[2]—				
STORAGE								
Storage Methods:								
Closed Metal Drums	12	10	47	49	46	45	36	45
Above Ground Tanks	3	6	10	10	10	12	8	11
Closed Fiberboard Drums	0	0	6	1	8	6	5	6
Pails/Garbage Cans	5	3	6	1	1	1	4	1
Generators Storing for ≤ 180 Days	83	74	93	94	90	92	89	92
Average Duration of Storage (Days):								
0 - 7	58	54	55	52	47	42	53	43
8 - 90	24	20	38	42	40	49	35	48
91 - 180	2	<1	0	0	3	2	2	1
>180	17	26	7	6	10	8	11	8
TREATMENT/RECYCLING								
Generators Treating	33	46	23	22	22	26	26	26
Treatment Methods:								
Neutralization	8	13	17	14	12	17	12	17
Evaporation	11	10	3	5	13	12	9	11
Other Chemical Treatment	7	10	3	1	0	0	3	<1
Generators Recycling	39	32	60	60	50	54	50	54
Recycling Methods:								
Reused	29	18	45	46	44	46	40	45
Reclaimed	13	14	19	17	12	8	14	9
DISPOSAL								
Generators Disposing On-Site	50	48	41	36	44	42	45	42
Disposal Methods:								
Sewer System	32	30	29	23	23	27	27	27
Septic Tank	10	6	3	2	12	5	9	4

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 103

PROFILE OF FORMULATORS[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	275	31	232	158	395	2,145	902 (± 81)	2,333 (± 292)
Number of Small Quantity Generators Shipping Waste Off-Site	162	20	138	84	282	1,577	582[a] (± 44)	1,681 (± 266)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	37	41	63	67	78	86	63	84
Pails/Garbage Cans	18	6	5	4	7	3	9	3
Open Metal Drums	8	12	6	5	7	7	7	7
Bulk Waste Container	16	10	3	2	3	1	7	1
Closed Fiberboard Drums	5	1	6	6	5	4	5	4
Piles	15	10	3	6	4	<1	4	1
Open Fiberboard Drums	5	1	3	4	3	1	4	1
Generators Storing for ≤ 180 Days	82	78	96	97	97	94	92	94
Average Duration of Storage (Days):								
0 - 7	34	30	26	19	15	6	23	7
8 - 90	38	36	57	64	69	74	58	74
91 - 180	10	12	13	14	13	14	12	14
>180	18	22	4	3	3	6	8	6
TRANSPORT								
Generators Notifying Transporters	68	72	79	78	92	97	82	96
Notification Methods:								
EPA Manifest	19	19	44	47	59	68	44	67
Labeled Containers	43	46	29	29	51	47	44	46
DOT Shipping Paper	7	7	11	10	21	23	15	22
Other	42	41	59	54	61	53	55	53
Transport Methods:								
Contracted Truck	62	66	68	64	84	84	74	83
Company Truck	14	14	23	22	12	11	15	12
Public Truck	10	9	7	4	3	1	6	2
Other	18	16	7	10	10	9	12	9
Destination:								
Recycling Facility	20	20	21	23	40	31	30	30
Subtitle C Landfill	17	11	38	33	32	35	29	35
Solid Waste Landfill	44	42	33	28	18	15	29	16
Subtitle C Incinerator	3	6	13	16	24	22	16	22
Solid Waste Incinerator	10	8	9	5	8	9	9	9
Treatment Facility	2	4	0	0	6	4	4	4
Unknown	12	11	3	6	8	5	8	5

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 145.

LAUNDRIES [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	6,693	921	6,438	4,225	2,515	8,272	15,646	13,418
WASTE STREAM GENERATED								
Dry Cleaning Filtration Residues	6,620	918	6,417	4,206	2,515	8,272	15,551	13,396
Other	173	3	44	19	0	0	117	22

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF LAUNDRIES[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	6,693	921	6,438	4,225	2,515	8,272	15,646 (± 520)	13,418 (± 1,850)
Number of Small Quantity Generators Managing Waste On-Site	1,618	196	1,391	938	675	2,773	3,684[a] (± 476)	3,907 (± 1,182)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Pails/Garbage Cans	13	14	19	21	18	8	16	11
Closed Metal Drums	15	17	13	11	13	9	14	10
Bulk Waste Container	10	11	17	14	13	11	13	12
Above Ground Tanks	7	7	2	4	4	8	5	7
Piles	4	5	4	5	5	2	4	3
Generators Storing for ≤ 180 Days	96	94	98	98	100	100	98	99
Average Duration of Storage (Days):								
0 - 7	76	73	70	74	83	87	75	83
8 - 90	18	20	28	24	17	13	22	16
91 - 180	1	2	0	0	0	0	1	<1
>180	4	6	2	2	0	0	2	1
TREATMENT/RECYCLING								
Generators Treating	25	33	43	42	31	38	33	39
Treatment Methods:								
Evaporation	7	8	26	26	22	35	17	32
Other Physical Treatment	7	10	13	12	4	2	9	4
Generators Recycling	41	38	36	32	35	29	38	30
Recycling Methods:								
Reclaimed	29	21	21	17	26	19	25	19
Reused	9	15	13	14	13	18	11	17
Applied to Land	5	4	2	1	0	0	3	<1
DISPOSAL								
Generators Disposing On-Site	40	39	51	58	48	43	46	47
Disposal Methods:								
Sewer System	28	23	31	37	44	40	32	39
Solid Waste Landfill	5	9	7	7	0	0	5	2
Do Not Know	4	5	4	5	4	3	4	4

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 124.

PROFILE OF LAUNDRIES[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	6,693	921	6,438	4,225	2,515	8,272	15,646 (± 520)	13,418 (± 1,850)
Number of Small Quantity Generators Shipping Waste Off-Site	5,560	796	5,575	3,611	2,253	7,025	13,388[a] (± 392)	11,431 (± 1,691)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Bulk Waste Containers	16	18	24	25	16	12	19	16
Pails/Garbage Cans	20	19	12	13	16	15	16	15
Closed Metal Drums	15	16	12	11	17	15	14	14
Piles	3	3	4	3	3	1	3	2
Generators Storing for ≤ 180 Days	98	98	98	98	100	100	98	99
Average Duration of Storage (Days):								
0 - 7	80	77	77	79	80	78	79	78
8 - 90	15	19	20	18	19	20	18	20
91 - 180	3	2	1	1	1	2	2	2
>180	2	2	2	2	0	0	2	1
TRANSPORT								
Generators Notifying Transporters	51	50	48	45	54	51	50	49
Notification Methods:								
Labeled Containers	15	16	13	12	6	6	13	9
EPA Manifest	4	6	5	5	7	6	5	5
Other	39	38	36	34	47	44	39	40
Transport Methods								
Public Truck	54	58	46	44	50	54	50	51
Contracted Truck	28	25	39	40	38	33	34	35
Company Truck	9	10	6	6	4	2	7	4
Other	13	12	12	13	11	13	12	13
Destination:								
Solid Waste Landfill	58	57	57	58	62	63	58	61
Subtitle C Landfill	5	7	10	9	12	12	8	11
Subtitle C Incinerator	5	8	8	7	4	2	6	4
Recycling Facility	4	6	3	3	4	8	4	6
Unknown	29	27	26	25	20	19	26	21

[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 455.

OTHER SERVICES [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	9,297	784	4,616	3,030	2,409	6,891	16,322	10,706
WASTE STREAM GENERATED								
Ignitable Wastes	211	8	56	20	161	674	427	703
Spent Solvents	174	6	174	45	203	85	552	135
Strong Acids or Alkalies	144	6	95	63	0	0	239	69
Wastes Containing Ammonia	1,059	86	95	9	100	271	1,253	367
Wastes Containing Formaldehyde	7,568	648	4,314	2,805	2,014	5,396	13,896	8,848
Other	454	31	151	88	135	464	741	583

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[1] Estimates based on Small Generator Survey results.

PROFILE OF OTHER SERVICES[1]
ON-SITE MANAGEMENT

	Generators of <25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of >100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	9,297	784	4,616	3,030	2,409	6,891	16,322 (± 1,041)	10,706 (± 1,768)
Number of Small Quantity Generators Managing Waste On-Site	8,610	725	4,486	2,962	2,184	5,885	15,280[a] (± 288)	9,572 (± 1,515)
STORAGE				—PERCENT[2]--				
Generators Storing for ≤ 180 Days	98	98	100	100	96	96	98	97
Average Duration of Storage (Days):								
0 - 7	96	95	96	97	96	96	96	96
8 - 90	2	3	3	2	0	0	2	1
91 - 180	0	0	1	1	0	0	<1	1
>180	2	2	0	0	4	4	2	3
TREATMENT/RECYCLING								
Generators Treating	8	9	6	6	5	2	7	4
Treatment Methods: Neutralization	5	8	3	3	3	2	4	3
Generators Recycling	2	<1	1	1	3	2	2	2
DISPOSAL								
Generators Disposing On-Site	98	99	99	99	99	98	98	98
Disposal Methods:								
Sewer System	87	91	87	88	92	94	88	92
Septic Tanks	10	8	13	11	11	10	11	10

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 270.

PROFILE OF OTHER SERVICES[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	9,297	784	4,616	3,030	2,409	6,891	16,322 (± 1,041)	10,706 (± 1,768)
Number of Small Quantity Generators Shipping Waste Off-Site	994	77	168	72	258	1,006	1,420[a] (± 369)	1,155 (± 810)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Bulk Waste Container	10	24	21	15	62	67	21	61
Pails/Garbage Cans	21	33	0	0	11	17	17	17
Closed Metal Drums	10	6	0	0	14	15	9	14
Generators Storing for ≤ 180 Days	100	100	100	100	100	100	100	100
Average Duration of Storage (Days):								
0 - 7	92	97	77	49	86	85	89	84
8 - 90	8	3	0	0	14	15	8	13
91 - 180	0	0	23	51	0	0	3	3
>180	0	0	0	0	0	0	0	0
TRANSPORT								
Generators Notifying Transporters	46	40	79	85	86	68	57	67
Notification Methods:								
Labeled Containers	32	31	23	5	0	0	25	2
Other	31	21	33	28	86	68	42	62
Transport Methods:								
Public Truck	45	50	21	15	55	49	44	47
Contracted Truck	24	20	79	85	0	0	26	7
Company Truck	21	24	0	0	45	51	23	46
Other	10	6	0	0	0	0	7	<1
Destination:								
Solid Waste Landfill	60	58	0	0	58	52	53	49
Subtitle C Landfill	26	31	56	80	0	0	25	7
Recycling Facility	9	12	23	5	0	0	9	1
Unknown	9	8	21	15	25	32	13	29

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 27.

PHOTOGRAPHY[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	4,115	430	2,423	1,527	2,817	16,095	9,355	18,052
WASTE STREAM GENERATED								
Ignitable Paint Wastes	106	3	11	5	0	0	116	8
Ignitable Wastes	134	7	101	20	67	139	302	166
Photographic Wastes	2,697	201	1,940	718	2,302	7,885	6,940	8,804
Solutions or Sludges Containing Silver	2,241	165	1,881	666	2,496	7,749	6,619	8,580
Spent Solvents	419	39	210	97	167	322	796	458
Strong Acids or Alkalies	66	2	2	1	0	0	67	3
Other	302	13	71	33	0	0	373	46

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF PHOTOGRAPHY[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	4,115	430	2,423	1,527	2,817	16,095	9,355 (± 409)	18,052 (± 1,326)
Number of Small Quantity Generators Managing Waste On-Site	3,143	313	2,039	1,133	2,528	13,785	7,710[a] (± 270)	15,230 (± 1,320)
STORAGE	--PERCENT[2]--							
Storage Methods:								
Pails/Garbage Cans	6	5	5	3	8	3	6	3
Above Ground Tanks	2	2	4	4	10	10	5	9
Closed Metal Drums	2	1	5	6	4	4	4	4
Generators Storing for ≤ 180 Days	95	95	97	96	95	94	95	94
Average Duration of Storage (Days):								
0 - 7	82	80	83	82	76	74	81	74
8 - 90	12	14	12	12	16	17	13	17
91 - 180	1	1	2	3	3	3	2	3
>180	5	5	3	4	5	6	5	6
TREATMENT/RECYCLING								
Generators Treating	14	12	12	9	22	19	16	18
Treatment Methods:								
Neutralization	6	4	5	3	5	3	5	3
Electrolysis	1	<1	3	2	10	8	5	7
Generators Recycling	13	14	13	8	38	33	22	31
Recycling Methods:								
Reclaimed	10	11	12	8	34	28	18	26
DISPOSAL								
Generators Disposing On-Site	95	92	95	90	94	86	95	86
Disposal Methods:								
Public Sewage	85	86	85	79	90	83	87	83
Septic Tank	8	6	9	10	3	1	7	2

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 417.

PROFILE OF PHOTOGRAPHY[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	4,115	430	2,423	1,527	2,817	16,095	9,355 (± 409)	18,052 (± 1,326)
Number of Small Quantity Generators Shipping Waste Off-Site	1,597	136	876	482	1,176	2,813	3,649[a] (± 343)	3,431 (± 669)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Pails/Garbage Cans	16	12	27	27	12	7	17	10
Closed Metal Drums	7	10	20	19	11	10	12	12
Bulk Waste Container	13	12	4	2	2	<1	7	1
Above Ground Tanks	2	3	8	6	13	16	7	14
Closed Fiberboard Drums	2	3	4	5	7	11	4	10
Generators Storing for ≤ 180 Days	88	92	86	87	92	93	89	93
Average Duration of Storage (Days):								
0 - 7	47	48	34	35	21	30	36	32
8 - 90	30	37	47	49	63	54	45	52
91 - 180	11	8	6	4	8	10	9	9
>180	12	8	14	13	8	7	11	7
TRANSPORT								
Generators Notifying Transporters	65	59	82	76	87	83	76	81
Notification Methods:								
Labeled Containers	25	22	37	35	50	37	36	36
Other	53	48	69	64	76	79	64	76
Transport Methods:								
Contracted Truck	49	48	77	72	71	68	63	68
Public Truck	35	25	14	11	13	10	23	11
Company Truck	13	16	8	12	7	6	10	7
Other	8	11	16	13	11	16	11	16
Destination:								
Recycling Facility	50	53	67	60	72	64	61	63
Solid Waste Landfill	36	29	12	10	10	7	22	8
Treatment Facility	2	1	8	9	11	10	6	9
Unknown	15	10	22	22	7	17	14	17

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 118.

TEXTILE MANUFACTURING [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	103	10	46	38	124	602	272	650
WASTE STREAM GENERATED								
Solvent Still Bottoms	9	1	5	<1	17	114	30	114
Spent Solvents	85	9	46	38	115	459	246	506
Other	19	1	9	<1	13	30	41	31

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF TEXTILE MANUFACTURING[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	103	10	46	38	124	602	272 (± 57)	650 (± 173)
Number of Small Quantity Generators Managing Waste On-Site	75	8	22	17	74	319	171[a] (± 32)	343 (± 129)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	5	10	9	8	57	49	28	46
Pails/Garbage Cans	20	10	0	0	13	<1	14	<1
Generators Storing for ≤ 180 Days	95	90	100	100	88	94	93	94
Average Duration of Storage (Days):								
0 - 7	82	83	63	59	38	61	60	62
8 - 90	7	2	37	41	51	32	30	32
91 - 180	7	6	0	0	0	0	3	<1
>180	5	10	0	0	12	6	7	6
TREATMENT/RECYCLING								
Generators Treating	34	22	24	28	13	11	24	12
Treatment Methods:								
Evaporation	34	22	0	0	0	0	15	1
Generators Recycling	12	14	60	49	50	48	34	47
Recycling Methods:								
Burned for Fuel	7	2	9	8	27	13	16	13
Reused	5	13	28	33	6	2	8	4
Reclaimed	0	0	23	8	12	20	8	19
DISPOSAL								
Generators Disposing On-Site	79	82	16	22	37	41	53	41
Disposal Methods:								
Sewer System	61	62	16	22	32	37	43	37
Solid Waste Landfill	19	8	0	0	13	<1	14	>1

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 33.

PROFILE OF TEXTILE MANUFACTURING[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	103	10	46	38	124	602	272 (± 57)	650 (± 173)
Number of Small Quantity Generators Shipping Waste Off-Site	41	4	29	22	71	302	141[a] (± 29)	327 (± 129)
STORAGE			--PERCENT[2]--					
Storage Methods:								
Closed Metal Drums	0	0	50	60	75	77	48	75
Pails/Garbage Cans	24	15	0	0	16	7	15	7
Bulk Waste Containers	0	0	17	1	11	9	9	8
Generators Storing for ≤ 180 Days	100	100	100	100	92	97	96	97
Average Duration of Storage (Days):								
0 - 7	64	84	50	40	25	23	41	25
8 - 90	24	4	50	60	67	74	51	72
91 - 180	12	12	0	0	0	0	4	<1
>180	0	0	0	0	8	3	4	3
TRANSPORT								
Generators Notifying Transporters	23	27	83	99	73	80	60	80
Notification Methods:								
Labeled Containers	0	0	33	39	41	57	28	55
EPA Manifest	0	0	0	0	41	54	21	30
DOT Shipping Papers	0	0	0	0	29	45	15	42
Other	23	27	83	99	55	52	51	55
Transport Methods:								
Public Truck	8	16	12	7	13	6	11	7
Company truck	12	<1	0	0	7	3	7	3
Contracted Truck	55	71	71	72	83	81	72	80
Other	24	13	17	21	17	20	19	20
Destination:								
Recycling Facility	23	38	71	92	39	23	41	27
Solid Waste Landfill	65	60	29	8	16	11	33	11
Subtitle C Landfill	12	<1	0	0	27	47	17	43
Unknown	12	2	0	0	17	20	12	18

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 27.

VEHICLE MAINTENANCE [1]

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	46,391	8,228	95,714	67,607	82,528	351,475	224,632	427,310
WASTE STREAM GENERATED								
Ignitable Paint Wastes	928	54	659	80	1,040	151	2,626	285
Ignitable Wastes	156	<1	468	145	984	1,020	1,608	1,165
Paint Wastes Containing Heavy Metals	0	0	234	11	156	7	390	19
Spent Solvents	13,392	1,576	26,247	8,684	18,904	35,213	58,542	45,472
Strong Acids or Alkalies	1,083	309	1,520	185	6,617	12,508	9,220	13,002
Used Lead-Acid Batteries	33,449	6,280	85,614	58,362	77,608	302,576	196,671	367,218
Other	196	8	44	140	0	0	352	149

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF VEHICLE MAINTENANCE[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	46,391	8,228	95,714	67,607	82,528	351,475	224,632 (± 11,632)	427,310 (± 64,648)
Number of Small Quantity Generators Managing Waste On-Site	9,104	1,499	11,992	5,074	10,406	12,343	31,507[a] (± 7,470)	18,915 (± 5,103)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Piles	24	34	7	7	14	25	14	21
Open Metal Drums	0	0	7	8	2	2	3	4
Generators Storing for ≤ 180 Days	98	98	98	99	80	63	92	75
Average Duration of Storage (Days):								
0 - 7	59	57	31	40	40	17	42	26
8 - 90	31	14	60	29	40	13	45	17
91 - 180	8	13	7	5	0	0	5	2
>180	2	2	2	1	20	37	8	25
TREATMENT/RECYCLING								
Generators Treating	8	8	16	10	10	16	12	14
Treatment Methods: Thermal Treatment	0	0	15	7	3	4	7	4
Generators Recycling	81	83	13	10	54	66	46	52
Recycling Methods:								
Reclaimed	29	43	1	1	17	29	15	23
Reused	8	6	1	2	24	28	11	19
DISPOSAL								
Generators Disposing On-Site	19	17	77	86	60	48	54	56
Disposal Methods:								
Sewer System	9	2	23	25	9	<1	14	7
Solid Waste Incinerator	0	0	14	11	13	6	10	7
Septic Tank	0	0	17	20	7	3	9	8

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 56.

PROFILE OF VEHICLE MAINTENANCE[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	46,391	8,228	95,714	67,607	82,528	351,475	224,632 (± 11,632)	427,310 (± 64,648)
Number of Small Quantity Generators Shipping Waste Off-Site	40,562	7,245	90,444	62,987	79,621	339,582	210,627 (± 6,919)	409,813 (± 64,610)
	—PERCENT[2]—							
STORAGE								
Storage Methods:								
Piles	30	33	46	47	49	45	44	45
Closed Metal Drums	5	4	6	3	5	2	6	2
Bulk Waste Container	3	3	3	2	5	1	3	1
Generators Storing for ≤ 180 Days	95	97	96	97	93	95	95	96
Average Duration of Storage (Days):								
0 - 7	40	40	33	33	26	22	32	24
8 - 90	50	51	59	59	63	70	59	68
91 - 180	5	6	5	5	4	4	4	4
>180	5	3	4	3	7	5	5	4
TRANSPORT								
Generators Notifying Transporters	78	74	91	95	92	97	65	96
Notification Methods:								
Labeled Containers	22	22	27	29	24	23	25	24
Other	56	54	77	81	78	81	54	80
Transport Methods:								
Contracted Truck	59	62	80	79	80	79	76	78
Company Truck	21	21	16	13	13	13	16	13
Public Truck	12	8	7	5	7	6	8	6
Other	10	10	6	5	8	5	8	5
Destination:								
Recycling Facility	69	73	84	84	84	85	81	85
Solid Waste Landfill	11	6	5	4	6	2	7	2
Unknown	18	15	14	11	16	13	16	12

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 460.

EQUIPMENT REPAIR[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of SQGs in Industry Group	1,149	90	377	204	269	650	1,795	943
WASTE STREAM GENERATED								
Ignitable Paint Wastes	0	0	7	<1	0	0	7	<1
Ignitable Wastes	66	1	63	29	63	103	192	132
Spent Solvents	880	81	261	109	206	547	1,346	737
Strong Acids or Alkalies	188	6	63	30	0	0	251	36
Other	15	2	53	36	0	0	68	38

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF EQUIPMENT REPAIR[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	1,149	90	377	204	269	650	1,795 (± 560)	943 (± 497)
Number of Small Quantity Generators Managing Waste On-Site	887	73	246	143	265	645	1,398[a] (± 245)	860 (± 483)
STORAGE				--PERCENT[2]--				
Storage Methods: Closed Metal Drums	15	19	78	74	45	47	31	49
Generators Storing for ≤ 180 Days	87	81	71	82	100	100	87	95
Average Duration of Storage (Days):								
0 - 7	79	79	23	6	55	53	65	51
8 - 90	8	2	48	56	45	47	23	45
91 - 180	0	0	0	0	0	0	0	0
>180	13	19	29	18	0	0	13	5
TREATMENT/RECYCLING								
Generators Treating	22	20	26	40	53	46	28	43
Treatment Methods: Evaporation	22	20	26	40	53	46	28	43
Generators Recycling	35	41	24	17	21	31	30	30
Recycling Methods:								
Reused	20	20	0	0	0	0	13	2
Burned for Fuel	6	17	23	16	21	31	12	28
DISPOSAL								
Generators Disposing On-Site	57	64	50	43	47	54	54	53
Disposal Methods: Sewer System	49	60	21	25	24	16	39	21

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 24.

PROFILE OF EQUIPMENT REPAIR[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	1,149	90	377	204	269	650	1,795 (± 560)	943 (± 497)
Number of Small Quantity Generators Shipping Waste Off-Site	462	24	193	90	4	5	659[a] (± 292)	179 (± 68)
STORAGE				—PERCENT[2]--				
Storage Methods:								
Closed Metal Drum	28	57	97	97	0	0	48	85
Generators Storing for ≤ 180 Days	100	100	67	68	100	100	90	76
Average Duration of Storage (Days):								
0 - 7	68	32	0	0	0	0	48	7
8 - 90	20	16	66	66	100	100	34	57
91 - 180	12	52	2	2	0	0	9	12
>180	0	0	33	32	0	0	10	24
TRANSPORT								
Generators Notifying Transporters	86	94	99	99	0	0	90	94
Notification Methods:								
Labeled Containers	46	38	33	32	0	0	42	32
EPA Manifest	0	0	34	34	0	0	10	26
Transport Methods:								
Company Truck	28	4	66	66	100	100	39	55
Contract Truck	17	33	34	34	0	0	22	32
Public Truck	30	5	0	0	0	0	21	1
Other	26	58	0	0	0	0	18	12
Destination:								
Solid Waste Landfill	57	6	33	33	0	0	49	26
Recycling Facility	3	8	35	35	100	100	13	32
Treatment Facility	14	6	0	0	0	0	10	1
Subtitle C Landfill	0	0	33	32	0	0	10	24
Unknown	26	77	0	0	0	0	18	16

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 13.

METAL MANUFACTURING [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	18,955	1,648	7,290	4,845	11,076	58,159	37,320	64,652
WASTE STREAM GENERATED								
Cyanide Wastes	502	4	52	8	1,208	1,572	1,762	1,585
Ignitable Paint Wastes	793	42	0	0	451	1,167	1,244	1,209
Ignitable Waste	209	7	27	12	65	474	302	493
Other Reactive Wastes	2	<1	3	1	1	<1	6	2
Paint Wastes Containing Heavy Metals	111	<1	0	0	0	0	111	<1
Solvent Still Bottoms	1,734	95	286	7	611	1,540	2,631	1,642
Spent Plating Wastes	1,266	115	398	87	1,034	4,528	2,698	4,730
Spent Solvents	14,897	1,257	6,396	4,028	8,732	34,570	30,025	39,855
Strong Acid or Alkalies	1,829	101	1,084	484	2,501	12,008	5,415	12,593
Wastewater Sludges Containing Heavy Metals	432	11	356	175	790	2,216	1,578	2,402
Other	94	14	70	44	64	82	228	140

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF METAL MANUFACTURING[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	18,955	1,648	7,290	4,845	11,076	58,159	37,320 (± 3,409)	64,652 (± 10,811)
Number of Small Quantity Generators Managing Waste On-Site	11,287	1,499	2,452	1,599	4,261	27,627	18,000[a] (± 2,198)	30,114 (± 8,030)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Closed Metal Drums	17	28	36	39	35	22	24	23
Above Ground Tanks	1	<1	2	2	12	17	3	16
Open Metal Drums	3	3	2	<1	5	3	3	3
Generators Storing for ≤ 180 Days	73	75	93	91	94	99	81	98
Average Duration of Storage (Days):								
0 - 7	34	31	53	51	37	41	37	41
8 - 90	22	25	34	38	43	47	29	46
91 - 180	18	20	6	3	14	11	15	11
>180	27	25	7	9	6	1	19	2
TREATMENT/RECYCLING								
Generators Treating	41	37	39	31	44	33	41	33
Treatment Methods:								
Evaporation	23	29	17	8	12	7	19	8
Filtration	1	4	7	8	16	15	6	14
Neutralization	1	1	21	16	17	19	7	19
Thermal Treatment	12	3	0	0	0	0	7	<1
Generators Recycling	21	15	23	21	42	44	26	42
Recycling Methods:								
Reused	12	5	18	17	21	9	15	9
Reclaimed	3	5	6	4	15	20	6	19
Burned for Fuel	3	2	<1	<1	14	17	5	16
DISPOSAL								
Generators Disposing On-Site	39	43	62	71	45	43	44	45
Disposal Methods:								
Sewer System	14	8	46	47	29	35	22	35
Septic Tank	5	3	11	15	7	5	6	6
Solid Waste Landfill	6	6	0	0	0	0	4	<1
Solid Waste Incinerator	5	6	0	0	0	0	3	<1

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 152.

PROFILE OF METAL MANUFACTURING[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	18,955	1,648	7,290	4,845	11,076	58,159	37,320 (± 3,409)	64,652 (± 10,811)
Number of Small Quantity Generators Shipping Waste Off-Site	9,408	837	5,435	3,454	8,300	36,628	23,144[a] (± 2,039)	40,919 (± 8,497)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	45	66	62	66	57	66	53	66
Open Metal Drums	6	3	0	0	7	4	5	4
Above Ground Tanks	4	8	1	2	6	8	4	8
Generators Storing for ≤ 180 Days	79	74	83	87	88	94	83	93
Average Duration of Storage (Days):								
0 - 7	28	13	20	15	17	12	22	13
8 - 90	35	45	39	49	63	61	46	68
91 - 180	16	16	24	23	8	11	15	12
>180	21	26	17	13	12	6	17	7
TRANSPORT								
Generators Notifying Transporters	70	87	91	92	97	98	85	98
Notification Methods:								
Labeled Containers	32	40	44	43	67	64	47	62
EPA Manifest	15	20	35	35	57	69	35	65
DOT Shipping Papers	4	9	7	7	9	8	7	8
Other	53	66	69	72	71	69	63	69
Transport Methods:								
Contracted Truck	56	57	78	77	76	78	68	78
Public Truck	21	17	7	6	2	1	11	2
Company Truck	12	10	9	9	2	1	7	2
Other	19	17	7	9	22	20	17	19
Destination:								
Recycling Facility	40	41	66	65	59	60	53	60
Solid Waste Landfill	25	16	9	7	8	5	15	5
Subtitle C Landfill	9	21	15	15	13	15	12	15
Subtitle C Incinerator	2	1	8	5	12	8	7	8
Treatment Facility	5	3	2	3	3	1	4	1
Unknown	26	19	8	9	20	18	20	17

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 198.

CONSTRUCTION [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	9,021	588	2,540	1,471	1,117	2,974	12,677	5,033
WASTE STREAM GENERATED								
Ignitable Paint Wastes	2,262	231	1,137	533	940	1,640	4,340	2,404
Ignitable Wastes	4,749	162	239	97	182	207	5,170	466
Spent Solvents	619	52	1,359	839	570	637	2,548	1,528
Strong Acids or Alkalies	1,629	72	0	0	0	0	1,629	72
Other	327	72	2	1	120	490	349	563

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF CONSTRUCTION[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	9,021	588	2,540	1,471	1,117	2,974	12,677 (± 2,621)	5,033 (± 1,513)
Number of Small Quantity Generators Managing Waste On-Site	3,069	213	909	729	576	966	4,553[a] ± 1,414)	1,908 (± 934)
	--PERCENT[2]--							
STORAGE								
Storage Methods:								
Closed Metal Drums	12	14	0	0	0	0	8	2
Below Ground Tanks	0	0	0	0	34	19	4	9
Pails/Garbage Cans	0	0	0	0	34	32	4	16
Other	6	4	0	0	0	0	4	1
Generators Storing for ≤ 180 Days	100	100	100	100	100	100	100	100
Average Duration of Storage (Days):								
0 - 7	78	53	42	41	32	21	65	32
8 - 90	23	47	58	59	68	79	35	68
TREATMENT/RECYCLING								
Generators Treating	17	49	0	0	0	0	11	5
Treatment Methods:								
Thermal Treatment	11	33	0	0	0	0	7	4
Evaporation	6	16	0	0	0	0	4	2
Generators Recycling	24	28	0	0	68	79	25	43
Recycling Methods:								
Reused	23	28	0	0	68	79	24	43
Blended for Fuel	6	2	0	0	0	0	4	<1
Burned for Fuel	6	2	0	0	0	0	4	<1
DISPOSAL								
Generators Disposing On-Site	45	22	100	100	32	21	54	52
Disposal Methods:								
Public Sewage	23	13	0	0	32	21	20	12
Solid Waste Landfill	6	4	20	28	0	0	8	11
Solid Waste Incinerator	8	3	0	0	0	0	5	<1
Do Not Know	14	2	58	59	0	0	21	23

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 24.

PROFILE OF CONSTRUCTION[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	9,021	588	2,540	1,471	1,117	2,974	12,677 (± 2,621)	5,033 (± 1,513)
Number of Small Quantity Generators Shipping Waste Off-Site	6,591	424	1,838	1,043	723	2,008	9,152[a] (± 1,519)	3,475 (± 1,399)
	—PERCENT[2]—							
STORAGE								
Storage Methods:								
Closed Metal Drums	6	12	11	6	75	64	13	40
Bulk Waste Container	9	6	13	9	25	21	11	16
Piles	5	11	0	0	0	0	4	1
Generators Storing for ≤ 180 Days	100	100	100	100	75	88	98	93
Average Duration of Storage (Days):								
0 - 7	86	84	47	43	25	31	73	41
8 - 90	14	16	53	57	42	50	24	48
91 - 180	0	0	0	0	8	6	1	4
>180	<1	<1	0	0	25	12	2	7
TRANSPORT								
Generators Notifying Transporters	56	75	63	46	24	36	53	42
Notification Methods:								
Labeled Containers	28	13	19	15	0	0	22	5
Other	45	64	43	31	0	0	38	14
Transport Methods:								
Company Truck	36	62	34	23	76	64	39	51
Contracted Truck	21	17	23	17	24	36	21	28
Public Truck	19	8	4	7	76	64	20	40
Other	11	12	11	10	0	0	10	5
Destination:								
Solid Waste Landfill	73	76	23	17	76	64	63	51
Recycling Facility	13	17	24	16	24	12	16	14
Solid Waste Incinerator	0	0	27	25	0	0	5	7
Unknown	18	8	40	52	0	0	21	17

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 43.

MOTOR FREIGHT TERMINALS [1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	38	8	64	42	45	112	148	161
WASTE STREAM GENERATED								
Ignitable Paint Wastes	0	0	0	0	13	41	13	41
Spent Solvents	0	0	0	0	12	18	122	18
Used Lead-Acid Batteries	38	8	64	42	33	53	135	103

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF MOTOR FREIGHT TERMINALS[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	39	8	64	42	45	112	148 (± 46)	161 (± 52)
Number of Small Quantity Generators Managing Waste On-Site	0	0	6	3	14	23	19[a] (± 18)	25 (± 15)

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 3.

Note: There are too few responses indicating on-site management to allow for a detailed presentation of on-site management practices.

PROFILE OF MOTOR FREIGHT TERMINALS[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	39	8	64	42	45	112	148 (± 46)	161 (± 52)
Number of Small Quantity Generators Shipping Waste Off-Site	39	8	59	39	38	101	135[a] (± 15)	148 (± 52)
				—PERCENT[2]—				
STORAGE								
Storage Methods:								
Piles	34	37	57	70	51	35	49	44
Closed Metal Drums	0	0	0	0	17	45	5	30
Open Metal Drums	16	18	0	0	0	0	5	1
Below Ground Tanks	0	0	0	0	15	2	4	1
Generators Storing for ≤ 180 Days	100	100	100	100	100	100	100	100
Average Duration of Storage (Days):								
0 - 7	84	82	57	54	49	33	63	41
8 - 90	16	18	43	46	51	67	38	59
TRANSPORT								
Generators Notifying Transporters	100	100	100	100	83	89	95	92
Notification Methods:								
Labeled Containers	17	18	56	57	32	50	38	50
DOT Shipping Papers	0	0	12	16	17	45	10	35
EPA Manifest	0	0	0	0	17	45	5	30
Other	100	100	77	77	83	89	85	86
Transport Methods:								
Contracted Truck	52	57	77	77	83	86	72	82
Public Truck	0	0	11	7	17	12	9	10
Company Truck	48	43	23	23	0	0	24	8
Other	0	0	0	0	15	2	4	1
Destination:								
Recycling Facility	83	91	89	93	66	42	81	58
Solid Waste Landfill	0	0	0	0	17	12	5	8
Subtitle C Incinerator	0	0	0	0	17	45	5	30
Unknown	32	26	11	7	15	2	18	5

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 21.

FURNITURE MANUFACTURING AND REFINISHING[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	2,141	182	635	421	579	3,100	3,355	3,703
WASTE STREAM GENERATED								
Ignitable Paint Wastes	1,417	126	381	234	2297	1,257	2,095	1,618
Ignitable Wastes	426	21	154	86	124	596	704	703
Solvent Still Bottoms	20	6	0	0	23	122	43	128
Spent Solvents	52	28	23	101	26	887	948	1,017
Other	21	<1	0	0	25	237	27	237

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF FURNITURE MANUFACTURING AND REFINISHING[1] ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	2,141	182	635	421	579	3,100	3,355 (± 411)	3,703 (± 1,065)
Number of Small Quantity Generators Managing Waste On-Site	832	63	294	173	218	1,270	1,344[a] (± 265)	1,506 (± 804)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	17	19	23	19	51	40	24	36
Pails/Garbage Cans	13	19	0	0	0	0	8	1
Bulk Waste Container	5	<1	0	0	9	28	5	24
Above Ground Tanks	0	0	7	5	10	4	3	4
Generators Storing for ≤ 180 Days	72	67	100	100	90	79	81	95
Average Duration of Storage (Days):								
0 - 7	46	51	70	76	58	70	53	69
8 - 90	26	16	30	25	10	5	24	8
91 - 180	0	0	0	0	22	22	4	18
>180	28	33	0	0	10	4	19	5
TREATMENT/RECYCLING								
Generators Treating	21	31	33	34	19	32	23	32
Treatment Methods:								
Evaporation	18	30	14	11	19	32	17	29
Filtration	5	10	0	0	0	0	3	<1
Generators Recycling	46	42	15	13	18	13	35	14
Recycling Methods:								
Reused	16	19	7	4	10	10	13	9
Burned as Fuel	10	11	0	0	8	3	8	3
Reclaimed	3	2	8	10	0	0	3	1
DISPOSAL								
Generators Disposing On-Site	41	31	64	62	63	55	50	55
Disposal Methods:								
Sewer System	11	3	23	20	31	29	17	27
Septic Tank	12	18	14	12	10	5	12	6
Solid Waste Incinerator	5	3	15	21	0	0	6	3

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 53.

PROFILE OF FURNITURE MANUFACTURING AND REFINISHING[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	2,141	182	635	421	579	3,100	3,355 (± 411)	3,703 (± 1,065)
Number of Small Quantity Generators Shipping Waste Off-Site	1,489	129	408	264	404	2,040	2,301[a] (± 231)	2,433 (± 756)
				—PERCENT[2]—				
STORAGE								
Storage Methods:								
Closed Metal Drums	17	26	24	26	48	47	24	43
Pails/Garbage Cans	19	20	13	14	5	<1	16	3
Bulk Waste Container	6	10	25	29	16	23	11	23
Open Metal Drums	1	2	12	15	9	3	5	4
Generators Storing for ≤ 180 Days	89	91	82	82	100	100	90	98
Average Duration of Storage (Days):								
0 - 7	67	65	55	51	16	12	56	19
8 - 90	22	26	28	31	57	53	28	49
91 - 180	0	0	0	0	28	35	5	29
>180	11	9	18	18	0	0	10	2
TRANSPORT								
Generators Notifying Transporters	46	50	69	71	82	80	57	78
Notification Methods:								
Labeled Containers	20	26	23	22	40	34	24	32
EPA Manifest	22	4	19	22	28	22	10	21
Other	35	41	45	46	67	70	43	66
Transport Methods:								
Contracted Truck	39	38	62	70	63	68	47	67
Public Truck	36	24	11	8	10	6	27	7
Company Truck	20	30	28	22	9	3	20	7
Other	11	12	0	0	18	23	10	20
Destination:								
Solid Waste Landfill	60	51	65	56	30	29	56	33
Recycling Facility	10	14	30	38	33	38	18	37
Subtitle C Landfill	9	9	0	0	9	1	7	1
Subtitle C Incinerator	4	3	0	0	24	21	7	18
Unknown	15	22	0	0	23	25	14	22

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 96.

PRINTING INDUSTRY[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	15,392	1,685	5,787	3,443	3,420	13,178	24,599	18,307
WASTE STREAM GENERATED								
Cyanide Wastes	0	0	0	0	51	63	51	63
Ignitable Wastes	0	0	0	0	20	272	20	272
Ink Sludges Containing Chromium or Lead	595	21	438	62	51	56	1,084	138
Photographic Wastes	11,643	1,204	4,777	2,174	2,578	6,071	18,998	9,449
Spent Plating Wastes	1,291	63	864	213	388	747	2,542	1,024
Spent Solvents	2,688	233	1,985	674	1,430	3,574	6,104	4,481
Strong Acids or Alkalies	591	47	364	147	326	837	1,281	1,031
Waste Ink Containing Solvents or Heavy Metals	2,474	103	888	112	705	1,337	4,059	1,552
Other	213	15	169	61	146	220	528	296

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF PRINTING INDUSTRY[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	15,392	1,685	5,787	3,443	3,420	13,178	24,599 (± 1,361)	18,307 (± 2,776)
Number of Small Quantity Generators Managing Waste On-Site	10,197	1,100	4,495	2,435	2,428	7,048	17,120[a] (± 877)	10,582 (± 1,886)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Pails/Garbage Cans	6	4	8	5	7	7	7	6
Closed Metal Drums	2	3	11	7	16	10	6	8
Generators Storing for ≤ 180 Days	97	97	96	97	96	95	97	96
Average Duration of Storage (Days):								
0 - 7	86	85	78	77	80	77	83	77
8 - 90	9	11	17	18	11	6	12	9
91 - 180	2	2	1	2	5	12	2	9
>180	3	3	4	3	4	5	3	4
TREATMENT/RECYCLING								
Generators Treating	8	6	11	10	20	13	10	12
Treatment Methods: Evaporation	5	3	4	2	7	2	5	2
Generators Recycling	4	4	9	10	15	5	7	6
Recycling Methods: Reclaimed	3	3	7	8	15	5	6	6
DISPOSAL								
Generators Disposing On-Site	95	95	95	90	93	94	94	93
Disposal Methods:								
Sewer System	82	82	87	84	86	89	84	88
Septic Tank	13	11	7	6	7	3	11	5

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 334.

PROFILE OF PRINTING INDUSTRY[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	15,392	1,685	5,787	3,443	3,420	13,178	24,599 (± 1,361)	18,307 (± 2,776)
Number of Small Quantity Generators Shipping Waste Off-Site	7,623	671	2,845	1,109	1,864	6,327	12,332[a] (± 944)	8,107 (± 2,090)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	18	21	27	30	45	49	24	44
Pails/Garbage Cans	18	15	8	5	15	11	16	11
Bulk Waste Container	14	13	13	5	9	9	13	9
Generators Storing for ≤ 180 Days	94	93	87	83	99	100	93	97
Average Duration of Storage (Days):								
0 - 7	53	47	37	29	55	37	50	37
8 - 90	32	36	44	47	41	61	36	57
91 - 180	8	10	6	7	3	2	7	3
>180	6	7	13	17	1	<1	7	3
TRANSPORT								
Generators Notifying Transporters	57	55	77	81	68	70	64	70
Notification Methods:								
Labeled Containers	16	18	27	29	27	36	20	34
EPA Manifest	1	2	6	7	28	39	6	31
Other	51	46	63	66	51	55	54	56
Transport Methods:								
Contracted Truck	54	55	52	52	55	61	53	59
Public Truck	35	32	32	22	21	13	32	16
Company Truck	6	7	10	10	3	1	6	3
Other	12	9	14	17	24	25	14	23
Destination:								
Solid Waste Landfill	41	34	43	25	24	14	39	17
Recycling Facility	38	42	38	45	39	47	38	47
Subtitle C Landfill	5	5	9	13	9	11	7	11
Treatment Facility	6	6	7	5	0	0	5	1
Solid Waste Incinerator	4	2	0	0	3	2	3	2
Unknown	12	11	15	20	27	26	15	24

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 194.

CLEANING AGENT AND COSMETICS MANUFACTURING[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	143	14	134	101	265	1,454	543	1,569
WASTE STREAM GENERATED								
Heavy Metal Dust	2	<1	0	0	0	0	2	<1
Ignitable Wastes	14	1	22	17	54	237	91	255
Pesticide Solutions	22	2	10	7	80	375	111	384
Solvent Still Bottoms	4	<1	0	0	4	8	7	8
Spent Solvents	48	4	67	38	118	388	233	430
Strong Acids or Alkalies	56	6	58	39	95	445	209	490
Other	8	<1	0	0	7	2	15	2

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF CLEANING AGENT AND COSMETICS MANUFACTURING[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	143	14	134	101	265	1,454	543 (± 66)	1,569 (± 301)
Number of Small Quantity Generators Managing Waste On-Site	117	12	77	52	161	833	355[a] (± 36)	896 (± 266)
				—PERCENT[2]—				
STORAGE								
Storage Methods:								
Closed Metal Drums	19	24	6	4	26	18	19	17
Above Ground Tanks	5	5	6	4	13	12	9	11
Closed Fiberboard Drums	0	0	5	1	6	2	4	2
Generators Storing for ≤ 180 Days	100	100	100	100	98	91	97	92
Average Duration of Storage (Days):								
0 - 7	83	75	82	90	70	75	77	76
8 - 90	17	25	8	5	18	14	16	14
91 - 180	0	0	10	5	2	2	3	2
>180	0	0	0	0	10	9	5	8
TREATMENT/RECYCLING								
Generators Treating	31	29	52	43	31	24	36	25
Treatment Methods:								
Neutralization	22	19	32	27	23	19	25	19
Evaporation	9	10	18	7	0	0	7	1
Filtration	3	<1	9	3	3	<1	4	1
Biological Treatment	0	0	6	8	7	9	4	9
Generators Recycling	24	20	12	5	29	15	24	15
Recycling Methods:								
Reused	18	12	8	2	27	13	20	13
Reclaimed	6	3	4	2	4	2	5	2
DISPOSAL								
Generators Disposing On-Site	60	53	76	80	71	77	68	77
Disposal Methods:								
Sewer System	48	36	66	71	62	74	58	73
Septic Tank	11	17	10	9	4	2	8	3

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 100.

PROFILE OF CLEANING AGENTS AND COSMETIC MANUFACTURING[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	143	14	134	101	265	1,454	543 (± 66)	1,569 (± 301)
Number of Small Quantity Generators Shipping Waste Off-Site	32	3	79	57	127	572	238 (± 39)	632 (± 136)
STORAGE				—PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	53	62	32	32	72	74	56	70
Above Ground Tanks	0	0	8	8	3	4	4	4
Open Metal Drums	0	0	5	4	5	3	4	3
Below Ground Tanks	0	0	8	12	3	11	4	11
Generators Storing for ≤ 180 Days	89	70	86	84	78	81	82	81
Average Duration of Storage (Days):								
0 - 7	10	7	30	26	12	3	18	5
8 - 90	80	63	52	52	54	67	57	65
91 - 180	0	0	4	6	13	11	8	10
>180	11	30	14	16	22	19	18	19
TRANSPORT								
Generators Notifying Transporters	72	99	75	71	100	100	88	97
Notification Methods:								
EPA Manifest	31	56	50	51	63	71	54	69
DOT Shipping Papers	10	29	16	12	26	26	20	24
Labeled Containers	42	46	37	23	61	65	51	61
Other	20	31	53	50	79	72	62	70
Transport Methods:								
Contracted Truck	68	61	73	75	86	84	79	83
Public Truck	22	11	11	16	3	1	8	3
Company Truck	10	29	9	4	6	11	7	10
Other	28	1	8	6	14	6	14	6
Destination:								
Subtitle C Landfill	31	56	36	31	37	40	36	39
Recycling Facility	48	32	24	25	35	38	33	37
Subtitle C Incinerator	10	7	24	31	32	35	26	34
Solid Waste Landfill	11	6	18	17	6	2	11	4
Solid Waste Incinerator	0	0	9	9	3	1	5	2
Unknown	0	0	8	6	12	4	9	4

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 56.

OTHER MANUFACTURING[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	1,037	91	581	399	946	4,871	2,564	5,361
WASTE STREAM GENERATED								
Arsenic Wastes	78	<1	13	7	19	104	40	111
Heavy Metal Waste Materials	46	2	30	19	93	411	168	432
Ignitable Wastes	154	7	120	67	252	1,055	526	1,129
Solvent Still Bottoms	14	<1	14	1	60	28	88	29
Spent Solvents	829	69	377	254	759	3,239	1,965	3,562
Other	105	11	59	53	7	26	171	96

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF OTHER MANUFACTURING[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	1,037	91	581	399	946	4,871	2,564 (± 298)	5,361 (± 906)
Number of Small Quantity Generators Managing Waste On-Site	517	46	181	107	241	951	939[a] (± 186)	1,103 (± 419)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Closed Metal Drums	18	28	44	43	75	77	37	72
Pails/Garbage Cans	20	24	8	12	0	0	12	2
Above Ground Tanks	0	0	9	8	18	11	6	10
Open Metal Drums	<1	1	16	14	6	7	5	7
Bulk Waste Container	6	4	0	0	7	8	5	7
Generators Storing for ≤ 180 Days	74	69	99	99	87	88	82	88
Average Duration of Storage (Days):								
0 - 7	55	53	55	61	44	54	52	55
8 - 90	19	17	26	21	37	34	25	32
91 - 180	0	0	18	17	7	<1	5	2
>180	26	31	1	1	13	12	18	12
TREATMENT/RECYCLING								
Generators Treating	69	79	21	19	19	16	47	19
Treatment Methods:								
Evaporation	49	42	10	8	6	7	31	9
Thermal Treatment	12	15	2	2	6	2	9	<3
Generators Recycling	6	6	59	59	39	45	25	45
Recycling Methods:								
Reclaimed	3	4	34	39	19	32	13	31
Reused	3	2	24	21	14	11	10	12
DISPOSAL								
Generators Disposing On-Site	35	33	23	25	49	41	37	39
Disposal Methods:								
Sewer System	18	6	21	22	12	13	17	14
Septic Tank	7	7	0	0	31	26	12	22

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 71.

PROFILE OF OTHER MANUFACTURING[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	1,037	91	581	399	946	4,871	2,564 (± 298)	5,361 (± 906)
Number of Small Quantity Generators Shipping Waste Off-Site	612	53	430	301	794	3,984	1,836[a] (± 197)	4,337 (± 829)
				--PERCENT[2]--				
STORAGE								
Storage Methods:								
Closed Metal Drums	23	41	67	67	79	77	58	75
Bulk Waste Container	12	10	7	4	13	15	11	15
Pails/Garbage Cans	16	9	4	6	4	3	8	4
Open Metal Drums	3	4	7	6	8	6	6	6
Generators Storing for ≤ 180 Days	82	88	87	91	96	98	89	97
Average Duration of Storage (Days):								
0 - 7	38	28	19	20	18	13	25	14
8 - 90	37	54	42	48	63	71	49	70
91 - 180	8	5	26	23	16	13	16	14
>180	18	12	13	9	4	2	11	3
TRANSPORT								
Generators Notifying Transporters	24	37	64	64	86	88	60	86
Notification Methods:								
Labeled Containers	5	12	24	28	49	61	28	58
EPA Manifest	7	8	18	23	49	52	28	49
DOT Shipping Papers	0	0	0	0	10	9	4	8
Other	21	35	63	63	56	53	46	54
Transport Methods:								
Contracted Truck	54	54	68	70	67	67	63	67
Public Truck	25	17	10	7	12	9	16	9
Company Truck	9	18	11	12	11	5	10	6
Other	13	11	11	11	14	21	13	20
Destination:								
Recycling Facility	19	26	54	59	52	60	42	59
Solid Waste Landfill	54	51	17	11	17	11	29	11
Subtitle C Landfill	9	4	5	4	18	15	12	14
Subtitle C Incinerator	0	0	16	17	17	24	11	23
Unknown	19	19	8	9	20	16	17	15

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 155.

PAPER INDUSTRY[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	42	5	56	43	83	496	181	544
WASTE STREAM GENERATED								
Ignitable Wastes	0	0	15	9	30	120	45	129
Solvent Still Bottoms	3	<1	0	0	0	0	3	<1
Spent Solvents	30	4	31	24	75	339	136	367
Strong Acids or Alkalies	10	1	7	5	15	36	32	41
Other	0	0	10	5	5	1	15	6

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF PAPER INDUSTRY[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	42	5	56	43	83	496	181 (± 34)	544 (± 148)
Number of Small Quantity Generators Managing Waste On-Site	26	3	21	18	35	106	82[a] (± 19)	127 (± 51)
STORAGE				--PERCENT[2]--				
Storage Methods: Closed Metal Drums	51	57	25	19	28	43	35	40
Generators Storing for ≤ 180 Days	70	55	88	88	79	80	79	80
Average Duration of Storage (Days):								
0 - 7	40	29	75	82	58	43	56	48
8 - 90	31	26	13	6	21	37	22	32
91 - 180	0	0	0	0	0	0	0	0
>180	30	45	12	12	21	20	21	20
TREATMENT/RECYCLING								
Generators Treating	38	39	12	15	21	17	24	17
Treatment Methods: Neutralization	29	22	12	15	14	1	18	4
Generators Recycling	51	47	28	25	52	57	45	52
Recycling Methods:								
Burned for Fuel	28	40	28	25	23	45	26	42
Reused	11	5	14	19	14	1	13	4
Blended for Fuel	12	2	0	0	14	10	10	8
DISPOSAL								
Generators Disposing On-Site	39	38	75	79	49	55	52	58
Disposal Methods:								
Sewer System	19	7	36	17	28	44	27	39
Septic Tank	0	0	38	42	6	5	12	10

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 29.

PROFILE OF PAPER INDUSTRY[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	42	5	56	43	83	496	181 (± 34)	544 (± 148)
Number of Small Quantity Generators Shipping Waste Off-Site	15	2	36	25	58	394	108[a] (± 17)	421 (± 137)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Closed Metal Drums	68	78	79	83	91	91	84	90
Above Ground Tanks	0	0	8	7	5	3	5	3
Generators Storing for ≤ 180 Days	83	85	77	73	95	97	88	96
Average Duration of Storage (Days):								
0 - 7	48	24	21	17	9	3	18	4
8 - 90	19	36	43	42	73	76	56	73
91 - 180	16	25	14	15	13	19	14	19
>180	17	15	23	27	5	3	12	4
TRANSPORT								
Generators Notifying Transporters	85	99	100	100	83	90	87	91
Notification Methods:								
Labeled Containers	49	38	93	95	48	62	63	64
EPA Manifests	17	15	79	75	65	77	63	76
DOT Shipping Papers	16	18	21	28	9	3	14	4
Other	85	99	72	75	48	47	61	49
Transport Methods:								
Contracted Truck	31	19	86	80	91	93	81	92
Company Truck	17	4	14	20	0	0	7	1
Other.	52	76	7	4	13	8	17	8
Destination:								
Recycling Facility	16	18	36	32	44	59	37	57
Subtitle C Landfill	0	0	35	42	30	20	28	22
Subtitle C Incinerator	0	0	21	19	26	31	21	30
Solid Waste Landfill	32	6	7	8	17	17	16	17
Treatment Facility	0	0	14	9	22	25	16	24
Unknown	52	76	7	4	0	0	10	1

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 39.

ANALYTIC AND CLINICAL LABORATORIES[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	3,574	319	1,549	847	1,286	5,909	6,409	7,171
WASTE STREAM GENERATED								
Ignitable Paint Wastes	199	15	212	49	88	104	499	168
Ignitable Wastes	447	30	516	109	556	1,564	1,519	1,704
Mercury Waste	19	<1	0	0	0	0	19	<1
Other Reactive Wastes	343	15	340	9	423	853	1,105	877
Spent Solvents	2,225	180	1,261	527	1,097	2,709	4,584	3,416
Strong Acids or Alkalies	1,971	78	949	241	614	679	3,534	998
Other	48	<1	24	6	1	<1	73	6

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF ANALYTICAL AND CLINICAL LABORATORIES[1] ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	3,574	319	1,549	847	1,286	5,909	6,409 (± 470)	7,171 (± 1,119)
Number of Small Quantity Generators Managing Waste On-Site	2,968	240	1,096	632	856	3,045	4,920[a] (± 237)	3,916 (± 829)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	12	11	19	19	34	31	17	28
Pails/Garbage Cans	4	2	9	4	7	4	6	4
Generators Storing for ≤ 180 Days	83	89	90	91	93	95	87	94
Average Duration of Storage (Days):								
0 - 7	65	66	60	61	51	56	62	58
8 - 90	10	7	22	13	31	19	17	17
91 - 180	8	11	9	9	11	9	9	9
>180	17	11	10	9	7	5	13	6
TREATMENT/RECYCLING								
Generators Treating	35	30	38	31	40	22	36	24
Treatment Methods:								
Neutralization	20	17	16	9	21	8	19	9
Evaporation	12	13	17	11	19	6	14	7
Dilution	7	6	11	9	4	1	8	3
Generators Recycling	10	8	11	9	28	25	13	22
Recycling Methods:								
Reclaimed	7	5	6	3	14	10	8	8
Reused	1	1	6	5	9	9	4	7
DISPOSAL								
Generators Disposing On-Site	84	83	86	79	87	71	85	73
Disposal Methods:								
Sewer System	65	61	69	62	70	58	67	59
Septic Tank	8	5	10	8	6	4	8	5
Subtitle C Incinerator	4	8	2	1	14	11	5	9
Solid Waste Incinerator	5	6	10	7	2	<1	5	2
Do Not Know	3	<1	2	1	5	2	3	2

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 264.

PROFILE OF ANALYTICAL AND CLINICAL LABORATORIES[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	3,574	319	1,549	847	1,286	5,909	6,409 (± 470)	7,171 (± 1,119)
Number of Small Quantity Generators Shipping Waste Off-Site	1,203	102	869	409	834	3,458	2,906 (± 280)	3,969 (± 788)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Closed Metal Drums	30	39	57	64	68	58	49	58
Pails/Garbage Cans	18	17	10	9	13	11	14	11
Bulk Waste Container	9	10	7	2	2	5	6	5
Open Metal Drums	2	<1	4	1	4	2	3	2
Generators Storing for ≤ 180 Days	86	90	82	80	88	75	85	76
Average Duration of Storage (Days):								
0 - 7	40	45	18	13	19	21	28	21
8 - 90	35	34	49	49	52	39	44	40
91 - 180	11	11	15	18	17	15	14	15
>180	14	10	18	20	12	25	15	24
TRANSPORT								
Generators Notifying Transporters	64	76	87	89	93	96	80	95
Notification Methods:								
Labeled Containers	35	55	55	63	59	64	48	64
EPA Manifest	9	10	51	59	52	55	34	54
DOT Shipping Paper	9	8	10	14	18	13	12	13
Transport Methods:								
Contracted Truck	46	51	64	68	76	78	60	76
Public Truck	26	19	13	4	11	3	18	4
Company Truck	15	15	26	13	13	5	18	6
Other	18	17	23	20	23	19	21	19
Destination:								
Solid Waste Landfill	48	33	27	11	20	8	34	9
Subtitle C Landfill	22	28	28	23	33	23	27	23
Recycling Facility	14	14	21	23	42	36	24	34
Subtitle C Incinerator	6	8	23	14	31	32	18	29
Solid Waste Incinerator	3	4	9	8	9	2	6	3
Treatment Facility	3	4	12	8	2	6	6	7
Unknown	18	17	29	23	19	10	22	11

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 140.

EDUCATIONAL AND VOCATIONAL SHOPS[1]
WASTE STREAM GENERATION

	Generators of $\leq$25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of $\geq$100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	3,043	167	196	124	241	888	3,481	1,179
WASTE STREAM GENERATED								
Ignitable Paint Wastes	1,304	79	48	12	168	82	1,520	173
Ignitable Wastes	255	6	26	1	96	311	377	318
Other Reactive Wastes	261	3	39	10	40	138	340	151
Spent Solvents	918	48	110	78	135	144	1,164	269
Strong Acids or Alkalies	1,685	32	42	14	89	182	1,816	228
Other	0	0	15	15	24	31	39	46

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF EDUCATIONAL AND VOCATIONAL SHOPS[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	3,043	167	196	124	241	888	3,481 (± 467)	1,179 (± 536)
Number of Small Quantity Generators Managing Waste On-Site	2,087	83	103	52	219	370	2,409[a] (± 236)	504 (± 203)
				--PERCENT[2]--				
STORAGE								
Storage Methods:								
Closed Metal Drums	7	14	0	0	33	16	9	14
Above Ground Tanks	3	3	0	0	11	2	3	2
Generators Storing for ≤ 180 Days	89	90	84	86	65	81	86	83
Average Duration of Storage (Days):								
0 - 7	77	82	84	86	10	7	71	27
8 - 90	9	7	0	0	11	12	9	10
91 - 180	3	2	0	0	44	62	7	46
>180	11	10	16	14	35	19	14	17
TREATMENT/RECYCLING								
Generators Treating	27	15	41	10	50	59	30	47
Treatment Methods:								
Neutralization	22	10	16	8	18	36	21	29
Evaporation	9	7	25	2	11	5	10	5
Generators Recycling	8	16	16	6	21	11	9	12
Recycling Methods:								
Reused	6	12	0	0	21	11	7	10
DISPOSAL								
Generators Disposing On-Site	93	81	99	98	79	89	91	88
Disposal Methods:								
Sewer System	66	58	>99	92	46	47	65	54
Septic Tank	18	18	0	0	45	40	19	32
Solid Waste Landfill	5	4	0	0	0	0	4	1

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 84.

PROFILE OF EDUCATIONAL AND VOCATIONAL SHOPS[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	3,043	167	196	124	241	888	3,481 (± 467)	1,179 (± 536)
Number of Small Quantity Generators Shipping Waste Off-Site	1,550	90	136	75	190	606	1,875[a] (± 251)	771 (± 505)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	17	28	52	57	45	38	22	39
Bulk Waste Container	15	16	0	0	24	<1	15	2
Pails/Garbage Cans	11	18	16	13	9	21	11	20
Above Ground Tanks	0	0	16	13	24	2	4	3
Generators Storing for ≤ 180 Days	86	86	88	96	67	61	85	68
Average Duration of Storage (Days):								
0 - 7	56	57	53	53	30	47	53	49
8 - 90	24	22	35	43	37	15	26	18
91 - 180	7	8	0	0	0	0	6	1
>180	14	14	12	4	33	39	15	32
TRANSPORT								
Generators Notifying Transporters	50	54	64	61	88	95	55	87
Notification Methods:								
Labeled Containers	25	24	30	18	9	25	24	24
EPA Manifest	3	4	0	0	21	4	4	3
DOT Shipping Papers	3	3	0	0	9	3	3	3
Other	36	39	46	46	88	73	42	67
Transport Methods:								
Contracted Truck	42	44	30	33	57	47	42	45
Public Truck	38	27	0	0	30	46	34	39
Company Truck	12	16	37	18	25	10	15	11
Other	16	15	46	50	21	5	18	11
Destination:								
Solid Waste Landfill	66	71	37	18	64	76	64	69
Subtitle C Landfill	10	6	17	36	24	8	12	10
Recycling Facility	7	7	18	29	46	21	12	20
Unknown	18	16	29	17	21	5	19	8

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity o waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 58.

WHOLESALE AND RETAIL SALES[1]
WASTE STREAM GENERATION

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	4,300	316	856	678	575	2,882	5,731	3,876
WASTE STREAM GENERATED								
Ignitable Paint Wastes	3,095	195	196	176	60	109	3,351	480
Ignitable Wastes	197	7	0	0	4	24	202	32
Spent Solvents	552	52	97	85	187	560	835	698
Strong Acids or Alkalies	67	12	61	34	65	368	193	414
Waste Pesticides	884	36	258	193	38	35	1,179	264
Other	173	13	309	1,898	389	1,785	871	3,696

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF WHOLESALE AND RETAIL SALES[1] ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	4,300	316	856	678	575	2,882	5,731 (± 952)	3,876 (± 2,211)
Number of Small Quantity Generators Managing Waste On-Site	1,007	72	348	206	234	878	1,589[a] (± 460)	1,156 (± 599)
				—PERCENT[2]—				
STORAGE								
Storage Methods:								
Pails/Garbage Cans	25	22	18	11	26	12	23	13
Closed Metal Drums	<1	<1	22	33	33	53	10	46
Piles	0	0	0	0	51	30	8	23
Bulk Waste Container	7	2	9	<1	2	1	7	1
Generators Storing for ≤ 180 Days	82	81	91	90	97	93	86	91
Average Duration of Storage (Days):								
0 - 7	76	77	85	84	13	9	69	27
8 - 90	<1	21	0	0	83	80	12	61
91 - 180	5	4	6	6	2	4	5	4
>180	18	19	9	10	3	7	14	9
TREATMENT/RECYCLING								
Generators Treating	29	41	23	22	14	12	26	15
Treatment Methods:								
Neutralization	12	18	17	16	4	5	12	8
Evaporation	17	23	1	2	2	5	11	5
Generators Recycling	55	56	25	27	95	83	54	72
Recycling Methods:								
Reused	49	37	25	27	40	52	43	46
Do Not Know	0	0	0	0	51	30	8	23
DISPOSAL								
Generators Disposing On-Site	34	27	66	55	4	10	37	19
Disposal Methods:								
Sewer System	17	15	55	45	3	6	23	14
Solid Waste Landfill	9	10	6	6	0	0	7	2

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing waste on-site is 41.

PROFILE OF WHOLESALE AND RETAIL SALES[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	4,300	316	856	678	575	2,882	5,731 (± 952)	3,876 (± 2,211)
Number of Small Quantity Generators Shipping Waste Off-Site	3,564	257	544	369	374	2,019	4,482[a] (± 457)	2,753 (± 2,157)
	--PERCENT[2]--							
STORAGE								
Storage Methods:								
Pails/Garbage Cans	36	36	20	18	7	<1	31	7
Closed Metal Drums	14	13	36	36	40	12	19	16
Bulk Waste Container	21	20	6	3	11	4	19	6
Piles	6	11	22	22	34	65	10	53
Generators Storing for ≤ 180 Days	91	85	86	82	100	100	92	95
Average Duration of Storage (Days):								
0 - 7	68	57	17	14	25	21	58	23
8 - 90	21	27	44	42	73	77	28	67
91 - 180	2	1	26	26	2	2	5	6
>180	9	15	14	18	0	0	8	5
TRANSPORT								
Generators Notifying Transporters	49	54	89	86	84	83	56	81
Notification Methods:								
Labeled Containers	18	18	35	35	40	12	22	17
DOT Shipping Paper	5	16	0	0	16	4	5	4
EPA Manifest	2	5	15	17	18	5	5	7
Other	37	38	82	86	68	79	45	76
Transport Methods:								
Public Truck	42	34	17	14	1	<1	36	6
Contracted Truck	28	22	37	39	64	77	32	66
Company Truck	22	34	52	51	26	5	26	16
Other	15	15	1	<1	24	17	14	14
Destination:								
Solid Waste Landfill	73	66	42	40	17	5	65	17
Recycling Facility	12	19	56	56	63	75	22	67
Subtitle C Landfill	3	4	11	10	19	4	6	5
Unknown	17	14	0	0	0	0	13	1

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 84.

APPENDIX E

Detailed Waste Stream Profiles of Quantity Generated and Management Practices

Waste Stream Profiles

The tables in this appendix present a detailed picture of the generation and management of the six largest and most often generated small quantity generator waste streams. The waste streams are:

- Lead-acid batteries,
- Spent solvents,
- Acids and alkalies,
- Photographic wastes,
- Ignitable paint wastes, and
- Ignitable wastes.

The estimates provided include results from all 22 surveyed industry groups. As with the industry profiles, the estimates presented are based only on waste quantities and management practices reported for targeted waste streams because these data provide the most reliable source for the estimates.

The table on page E-3 is a summary of the number of SQGs generating each waste stream and the quantity generated. Following this table are two tables for each of the six waste streams. These tables profile the on- and off-site management of these waste streams.

Ninety percent confidence limits for estimates of the total number of generators and total waste quantity appear in parentheses below the estimates. The estimates of percent of small quantity generators and waste quantity by management practice are intended to reflect general trends for each waste stream. Approximate 90 percent confidence limits can be calculated for the total number of small quantity generators using a certain on- or off-site management practice from the following equation:

$$\text{90 percent confidence limit} = \pm\ 1.65 \sqrt{\frac{p(100-p)}{n}}$$

where p is the percentage of small quantity generators using the practice of interest and n is the unweighted number of responses the estimate is based on. The number of responses is provided as a footnote to each on- or off-site management table. The confidence limits for the total quantity of waste managed by a certain method cannot be readily calculated, but they are generally larger due to the variability in waste quantity reported.

For some waste streams, the percentages which describe the management practices within an industry group by either the number of generators or waste quantity generated sum to more than 100 percent. This is the result of double counting. Waste streams that were managed by several methods, such as stored in both dumpsters and closed metal drums, or treated and then sent to a solid waste facility are counted in more than one category. Generators producing such waste streams, or producing several waste streams which were managed differently would also be counted in more than one category. Double counting is highest in the reporting of storage and transporter notification methods with a maximum of 19 percent of the generators and 26 percent of the waste being counted in more than one category. For the remaining management information reported, less than 5 percent of the generators and waste quantities are counted in more than one category.

NUMBER OF SMALL QUANTITY GENERATORS AND WASTE QUANTITY GENERATED BY WASTE STREAM[1]

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Arsenic Wastes	8	1	13	7	19	104	40	111
Cyanide Wastes	516	5	71	12	1,384	2,129	1,972	2,146
Dry Cleaning Filtration Residues	6,717	934	6,452	4,217	2,540	8,509	15,708	13,660
Empty Pesticide Containers	7,120	463	2,690	829	1,963	2,366	11,772	3,659
Heavy Metal Dust	34	1	14	9	40	163	88	173
Heavy Metal Solutions	7	<1	8	6	30	52	45	58
Heavy Metal Waste Materials	64	3	57	27	117	537	238	568
Ignitible Paint Wastes	10,138	752	2,650	1,089	3,122	4,872	15,910	6,713
Ignitible Wastes	7,072	265	1,879	644	2,873	7,576	11,824	8,485
Ink Sludges Containing Chromium or Lead	637	22	456	67	83	127	1,176	217
Mercury Wastes	19	<1	0	0	0	0	19	<1
Other Reactive Wastes	713	29	420	59	497	1,090	1,630	1,178
Paint Wastes Containing Heavy Metals	147	<1	234	11	156	7	537	19
Pesticide Solutions	1,173	120	1,854	927	1,747	5,022	4,774	6,069
Photographic Wastes	14,374	1,407	6,913	3,002	4,949	14,023	26,236	18,431
Solvent Still Bottoms	1,785	103	329	12	738	1,863	2,852	1,977
Spent Plating Wastes	2,691	188	1,269	304	1,422	5,275	5,382	5,768
Spent Solvents	38,521	3,667	39,108	15,778	33,475	85,923	111,104	105,368
Solutions or Sludges Containing Silver	2,380	185	2,102	754	2,648	7,981	7,130	8,919
Strong Acids or Alkalies	9,409	678	4,331	1,291	10,480	27,821	24,219	29,791
Used Lead-Acid Batteries	33,934	6,385	85,812	58,517	77,880	304,194	197,627	369,097
Waste Formaldehyde	7,616	648	4,314	2,805	2,014	5,396	13,944	8,850
Waste Inks Containing Flammable Solvents or Heavy Metals	2666	114	976	149	718	1,359	4,360	1,622
Waste Pesticides	1,800	64	1,051	336	990	857	3,842	1,257
Waste Water Containing Wood Preservatives	54	6	34	21	108	693	196	719
Waste Water Sludges Containing Heavy Metals	538	13	356	175	790	2,216	1,684	2,404
Wastes Containing Ammonia	1,059	86	95	9	100	271	1,254	367
OVERALL	132,762	16,141	132,133	91,056	113,086	490,427	377,981	597,625

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[1] Estimates based on Small Quantity Generator Survey results.

PROFILE OF USED LEAD-ACID BATTERIES[1] ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	33,934	6,385	85,812	58,517	77,880	304,194	197,627 (± 8,159)	369,097 (± 63,822)[a]
Number of Small Quantity Generators Managing Waste On-Site	5,020	916	3,618	2,208	3,001	6,217	11,639[a] ± 4,634)	9,341 (± 3,396)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Piles	44	56	22	16	52	55	39	46
Bulk Waste Container	0	0	0	0	24	25	6	17
Generators Storing for ≤ 180 Days	97	96	98	98	76	75	92	82
Average Duration of Storage (Days):								
0 - 7	58	46	19	16	0	0	31	8
8 - 90	24	28	79	82	75	75	55	73
91 - 180	15	21	0	0	0	0	7	2
>180	3	4	2	2	24	25	8	18
TREATMENT/RECYCLING								
Generators Treating	10	11	20	14	24	25	17	21
Treatment Methods:								
Thermal Treatment	6	8	20	14	0	0	9	4
Generators Recycling	87	85	7	8	76	75	59	60
Recycling Methods:								
Reclaimed	29	35	0	0	48	50	25	37
Reused	0	0	2	4	24	20	7	14
DISPOSAL								
Generators Disposing On-Site	6	7	94	92	48	50	44	56

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing lead-acid batteries on-site is 23.

PROFILE OF USED LEAD-ACID BATTERIES[1]
OFF-SITE MANAGEMENT

	Generators of <25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of >100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	33,934	6,385	85,812	58,517	77,880	304,914	197,627 (± 8,159)	369,097 (± 63,822)
Number of Small Quantity Generators Shipping Waste Off-Site	29,789	5,660	82,913	56,622	74,879	297,978	187,581[a] (± 6,803)	360,259 (± 63,683)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Piles	41	42	50	52	52	51	49	51
Bulk Waste Container	3	4	3	2	4	1	3	1
Generators Storing for ≤ 180 Days	99	99	97	97	95	97	97	97
Average Duration of Storage (Days):								
0 - 7	44	46	38	39	27	22	35	25
8 - 90	49	47	56	56	64	71	58	68
91 - 180	6	7	4	3	4	4	4	4
>180	<1	1	3	3	5	3	3	3
TRANSPORT								
Generators Notifying Transporters	59	57	70	71	73	66	70	66
Notification Methods:								
Labeled Containers	17	17	22	23	20	16	20	17
Other	47	45	60	61	59	56	58	57
Transport Methods:								
Contracted Truck	63	61	79	80	79	81	76	80
Company Truck	24	26	16	13	12	13	15	13
Public Truck	3	4	5	5	6	5	5	5
Other	12	11	4	4	5	4	5	4
Destination:								
Recycling Facility	79	82	88	87	84	89	85	89
Solid Waste Landfill	5	6	2	3	4	2	3	2
Unknown	18	14	10	10	11	7	12	8

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping lead acid batteries off-site is 375.

PROFILE OF SPENT SOLVENTS[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	38,521	3,667	39,108	15,778	33,475	85,923	111,104 (± 9,362)	105,368 (± 16,797)
Number of Small Quantity Generators Managing Waste On-Site	18,001	1,567	12,544	5,067	9,459	19,876	40,005[a] (± 5,396)	26,511 (± 7,313)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	15	22	12	19	21	32	15	29
Pails/Garbage Cans	5	3	5	4	4	3	5	3
Open Metal Drums	3	2	6	6	4	4	4	4
Below Ground Tanks	0	0	5	2	7	8	3	6
Generators Storing for ≤ 180 Days	83	83	96	95	82	81	87	84
Average Duration of Storage (Days):								
0 - 7	46	42	42	51	39	20	43	27
8 - 90	24	28	47	40	45	53	34	49
91 - 180	13	13	6	4	8	8	10	8
>180	17	17	4	5	18	19	13	16
TREATMENT/RECYCLING								
Generators Treating	34	31	19	12	13	11	24	12
Treatment Methods:								
Evaporation	24	28	7	6	9	5	15	7
Thermal Treatment	6	2	9	1	<1	<1	6	1
Generators Recycling	27	21	17	14	39	66	27	53
Recycling Methods:								
Reused	13	11	3	5	21	22	12	18
Burned for Fuel	3	2	5	3	8	25	5	20
Reclaimed	2	2	4	3	6	18	3	14
DISPOSAL								
Generators Disposing On-Site	44	50	67	76	54	31	54	41
Disposal Methods:								
Sewer System	21	16	33	36	14	12	23	17
Septic Tank	5	4	19	26	10	4	11	8
Solid Waste Incinerator	3	5	13	12	7	2	7	4

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing spent solvents on-site is 458.

PROFILE OF SPENT SOLVENTS[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	38,521	3,667	39,108	15,778	33,475	85,923	111,104 (± 9,362)	105,368 (± 16,797)
Number of Small Quantity Generators Shipping Waste Off-Site	21,860	2,262	27,300	11,068	24,935	68,845	74,114[a] (± 5,388)	82,175 (± 15,201)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	30	38	38	42	41	48	37	47
Below Ground Tanks	1	1	3	2	17	25	7	21
Above Ground Tanks	2	2	1	1	10	17	4	15
Open Metal Drum	5	5	2	<1	3	2	3	2
Pails/Garbage Cans	9	10	1	2	1	1	4	2
Generators Storing for ≤ 180 Days	85	87	92	93	91	93	90	93
Average Duration of Storage (Days):								
0 - 7	35	20	29	26	25	17	30	18
8 - 90	42	56	54	58	61	69	53	68
91 - 180	8	9	10	9	5	8	8	8
>180	15	13	8	7	9	7	10	7
TRANSPORT								
Generators Notifying Transporters	42	47	47	52	76	81	55	76
Notification Methods:								
Labeled Containers	16	18	14	17	35	38	22	35
EPA Manifest	8	12	10	15	23	38	14	34
DOT Shipping Papers	7	10	2	2	4	5	4	5
Other	25	27	37	42	55	58	40	55
Transport Methods:								
Contracted Truck	50	58	73	74	77	80	67	78
Public Truck	27	26	11	5	2	2	13	3
Company Truck	13	8	7	9	5	6	8	7
Other	11	10	13	15	17	13	14	13
Destination:								
Recycling Facility	39	44	47	55	70	71	52	68
Solid Waste Landfill	26	16	18	8	4	4	16	5
Subtitle C Landfill	9	8	6	8	4	6	6	6
Subtitle C Incinerator	1	1	5	5	6	7	4	7
Unknown	19	20	22	21	25	25	22	24

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping spent solvents off-site is 685.

PROFILE OF STRONG ACIDS AND ALKALIES[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	9,408	678	4,331	1,291	10,480	27,821	24,219 (± 4,549)	29,791 (± 11,474)
Number of Small Quantity Generators Managing Waste On-Site	7,772	561	2,399	1,077	6,517	14,705	16,688[a] ± 2,793)	16,342 (± 5,307)
STORAGE				--PERCENT[2]--				
Storage Methods: Closed Metal Drums	1	1	6	5	16	15	8	14
Generators Storing for ≤ 180 Days	84	94	99	99	98	98	92	98
Average Duration of Storage (Days):								
0 - 7	76	91	76	78	63	57	71	60
8 - 90	6	4	10	9	34	39	18	36
91 - 180	1	1	13	12	1	2	3	2
>180	16	6	1	1	2	2	8	2
TREATMENT/RECYCLING								
Generators Treating	25	12	41	44	24	42	27	41
Treatment Methods:								
Neutralization	15	10	36	40	15	37	18	36
Thermal Treatment	3	1	0	0	5	3	4	3
Dilution	6	1	5	5	<1	<1	3	<1
Generators Recycling	19	58	9	13	37	26	24	26
Recycling Methods:								
Reused	4	2	8	13	17	5	10	5
Reclaimed	14	55	1	1	9	19	10	19
Burned for Fuel	0	0	0	0	11	3	4	3
DISPOSAL								
Generators Disposing On-Site	67	35	85	89	56	66	65	67
Disposal Methods:								
Sewer System	56	31	76	84	38	52	52	53
Septic Tank	6	2	5	4	6	11	6	10
Solid Waste Incinerator	1	<1	1	<1	11	3	5	3

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing strong acids and alkalies waste on-site is 381.

PROFILE OF STRONG ACIDS AND ALKALIES[1] OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	9,408	678	4,331	1,291	10,480	27,821	24,219 (± 4,549)	29,791 (± 11,474)
Number of Small Quantity Generators Shipping Waste Off-Site	3,360	441	2,066	261	5,843	135	11,269 (± 2,037)	16,710 (± 10,982)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Pails/Garbage cans	4	1	31	2	10	36	12	34
Closed metal Drums	3	1	15	33	16	5	12	6
Above Ground Tanks	6	11	5	22	10	34	8	33
Below Ground Tanks	0	0	29	2	3	12	7	12
Piles	0	0	0	0	10	<1	5	<1
Generators Storing for ≤ 180 Days	91	89	93	99	89	89	91	89
Average Duration of Storage (Days):								
0 - 7	82	86	36	31	33	43	48	43
8 - 90	9	3	25	63	56	47	36	46
91 - 180	0	0	32	5	<1	<1	6	<1
>180	9	11	7	1	11	11	9	11
TRANSPORT								
Generators Notifying Transporters	34	19	94	80	47	47	51	46
Notification Methods:								
Labeled Containers	17	7	59	61	31	12	32	12
EPA Manifest	6	12	25	18	20	41	17	40
DOT Shipping Papers	1	1	12	12	4	3	5	3
Transport Methods:								
Contracted Truck	47	74	57	42	62	37	57	38
Company Truck	22	10	5	14	17	3	16	3
Public Truck	4	1	36	40	10	36	13	35
Other	16	14	3	4	10	25	11	24
Destination:								
Recycling Facility	13	2	36	8	44	12	33	11
Solid Waste Landfill	33	11	37	41	17	3	26	4
Subtitle C Landfill	7	12	19	26	7	15	9	15
Unknown	15	5	2	2	30	68	21	65

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping acids and alkalies off-site is 113.

PROFILE OF PHOTOTGRAPHIC WASTES[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	14,374	1,407	6,913	3,002	4,949	14,023	26,236 (± 844)	18,431 (± 2,532)
Number of Small Quantity Generators Managing Waste On-Site	10,716	1,059	5,747	2,530	4,478	12,196	20,941[a] (± 764)	15,786 (± 2,095)
STORAGE				—PERCENT[2]—				
Generators Storing for ≤ 180 Days	98	98	100	100	98	99	98	99
Average Duration of Storage (Days):								
0 - 7	88	88	87	86	89	93	88	91
8 - 90	10	10	12	11	8	6	9	7
91 - 180	2	1	1	2	2	1	2	1
>180	2	2	<1	<1	2	1	2	1
TREATMENT/RECYCLING								
Generators Treating	5	5	6	5	8	8	6	8
Generators Recycling	4	4	7	9	11	12	6	11
Recycling Methods: Reclaimed	3	3	6	8	9	9	5	8
DISPOSAL								
Generators Disposing On-Site	97	98	95	94	95	97	96	97
Disposal Methods:								
Sewer System	86	87	92	92	90	97	89	95
Septic Tank	9	10	4	4	5	1	7	2

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing photographic wastes on-site is 626.

PROFILE OF PHOTOGRAPHIC WASTES[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	14,374	1,407	6,913	3,002	4,949	14,023	26,236 (± 844)	18,431 (± 2,532)
Number of Small Quantity Generators Shipping Waste Off-Site	4,258	405	1,342	573	602	2,126	6,202[a] (± 774)	3,103 (± 1,402)
STORAGE				—PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	10	14	8	6	12	9	9	9
Bulk Waste Container	10	5	1	<1	3	<1	8	1
Pails/Garbage Cans	7	9	3	5	4	3	6	4
Closed Fiberboard Drums	3	1	8	9	0	0	4	2
Generators Storing for ≤ 180 Days	90	92	88	92	100	100	91	98
Average Duration of Storage (Days):								
0 - 7	42	37	30	25	65	73	42	59
8 - 90	39	47	35	56	32	24	40	33
91 - 180	10	9	13	12	3	4	10	6
>180	10	8	12	8	0	0	9	2
TRANSPORT								
Generators Notifying Transporters	66	66	80	81	55	45	68	54
Notification Methods:								
Labeled Containers	26	26	51	50	6	7	30	18
Other	51	51	52	61	55	45	52	48
Transport Methods:								
Contracted Truck	52	51	64	68	31	34	53	42
Public Truck	28	28	24	18	27	16	27	18
Company Truck	9	13	5	6	12	4	9	6
Other	10	8	8	8	30	46	12	34
Destination:								
Recycling Facility	54	57	49	55	27	28	51	37
Solid Waste Landfill	25	22	31	26	23	13	26	17
Subtitle C Landfill	4	5	14	15	12	7	7	8
Solid Waste Incinerator	4	2	0	0	9	6	3	4
Unknown	12	12	13	10	33	47	15	35

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping waste off-site is 148.

PROFILE OF IGNITABLE PAINT WASTES[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	10,138	752	2,650	1,089	3,122	4,872	15,910 (± 1,601)	6,713 (± 1,751)
Number of Small Quantity Generators Managing Waste On-Site	2,535	174	857	455	738	1,488	4,130[a] (± 920)	2,117 (± 884)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Closed Metal Drums	26	26	27	11	17	28	25	24
Pails/Garbage Cans	14	16	4	1	25	24	14	18
Below Ground Tanks	1	1	0	0	27	12	5	9
Generators Storing for ≤ 180 Days	90	85	82	97	93	96	89	96
Average Duration of Storage (Days):								
0 - 7	57	57	69	89	19	44	53	55
8 - 90	32	27	11	8	65	32	33	27
91 - 180	1	1	2	1	9	21	2	15
>180	10	15	18	3	7	4	11	4
TREATMENT/RECYCLING								
Generators Treating	9	11	6	4	18	44	10	33
Treatment Methods:								
Evaporation	9	11	2	<1	6	27	7	20
Filtration	2	4	0	0	12	17	3	12
Generators Recycling	46	53	5	4	77	51	43	41
Recycling Methods:								
Reused	38	50	0	0	76	50	37	40
Burned for Fuel	9	4	2	<1	0	0	6	<1
Blended for Fuel	7	2	2	<1	0	0	5	<1
Reclaimed	6	1	3	4	1	1	5	1
DISPOSAL								
Generators Disposing On-Site	48	38	95	96	18	22	52	39
Disposal Methods:								
Sewer System	17	10	15	12	8	3	15	5
Solid Waste Landfill	10	12	21	46	0	0	11	11
Septic Tank	9	9	20	4	0	0	10	2
Solid Waste Incinerator	5	3	7	10	0	0	5	3

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing ignitable paint wastes on-site is 66.

PROFILE OF IGNITIBLE PAINT WASTES[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	10,138	752	2,650	1,089	3,122	4,872	15,910 (± 1,601)	6,713 (± 1,751)
Number of Small Quantity Generators Shipping Waste Off-Site	8,548	656	1,834	646	2,428	3,641	12,810 (± 1,406)	4,943 (± 1,553)
				—PERCENT[2]—				
STORAGE								
Storage Methods:								
Closed Metal Drums	14	17	33	32	45	66	23	55
Bulk Waste Container	14	12	12	6	36	14	18	13
Pails/Garbage Cans	21	16	9	22	2	5	16	8
Above Ground Tanks	1	<1	1	2	14	12	3	9
Generators Storing for ≤ 180 Days	94	92	91	78	85	92	92	90
Average Duration of Storage (Days):								
0 - 7	71	69	67	60	42	27	65	36
8 - 90	22	23	24	18	41	54	26	45
91 - 180	2	1	<1	<1	3	12	2	9
>180	6	8	9	22	15	8	8	10
TRANSPORT								
Generators Notifying Transporters	51	58	64	71	44	53	52	56
Notification Methods:								
Labeled Containers	22	18	25	29	22	36	22	33
EPA Manifest	1	1	5	9	18	20	5	16
Other	33	45	43	52	37	45	35	46
Transport Methods:								
Public Truck	40	29	8	10	53	45	37	38
Contracted Truck	32	33	35	34	30	37	32	36
Company Truck	24	30	38	52	25	37	26	38
Other	10	12	21	4	15	16	12	14
Destination:								
Solid Waste Landfill	75	76	42	40	54	38	66	43
Recycling Facility	6	7	26	43	14	25	10	25
Subtitle C Landfill	5	6	1	<1	12	8	6	7
Unknown	14	12	21	4	18	25	16	20

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping ignitable paint wastes off-site is 178.

PROFILE OF IGNITABLE WASTES[1]
ON-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	7,072	265	1,879	644	2,873	7,576	11,824 (± 1,854)	8,485 (± 1,751)
Number of Small Quantity Generators Managing Waste On-Site	2,008	62	798	220	685	1,616	3,491[a] (± 770)	1,898 (± 587)
STORAGE				--PERCENT[2]--				
Storage Methods:								
Closed Metal Drums	5	6	20	37	16	29	11	29
Pails/Garbage Cans	4	3	25	3	3	3	8	3
Bulk Waste Container	<1	1	3	2	12	11	3	10
Generators Storing for ≤ 180 Days	97	93	95	97	95	80	95	83
Average Duration of Storage (Days):	97	93	95	97	90	80	95	83
0 - 7	91	87	51	58	73	63	78	64
8 - 90	5	7	40	31	9	13	14	15
91 - 180	1	<1	4	8	9	4	3	4
>180	3	7	5	3	10	20	5	17
TREATMENT/RECYCLING								
Generators Treating	6	9	38	39	19	16	16	18
Treatment Methods: Evaporation	6	8	29	26	5	7	11	10
Generators Recycling	11	20	17	27	14	25	13	25
Recycling Methods:								
Reused	10	12	11	12	5	8	9	9
Reclaimed	<1	<1	10	18	3	9	3	10
DISPOSAL								
Generators Disposing On-Site	80	75	60	42	78	63	75	61
Disposal Methods:								
Sewer System	37	52	31	35	65	54	41	52
Solid Waste Incinerator	15	15	25	3	1	2	15	2

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators managing waste on-site or the total quantity of waste managed on-site, within each size category.

[a] The unweighted number of respondents managing ignitable wastes on-site is 107.

PROFILE OF IGNITIBLE WASTES[1]
OFF-SITE MANAGEMENT

	Generators of ≤25 kg of Waste Per Month		Generators of >25 kg to <100 kg of Waste Per Month		Generators of ≥100 kg to 1,000 kg of Waste Per Month		Total	
	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)	Number of Generators	Waste Quantity (MT/yr.)
Number of Small Quantity Generators in Industry Group	7,072	265	1,879	644	2,873	7,567	11,824 (± 1,854)	8,485 (± 1,751)
Number of Small Quantity Generators Shipping Waste Off-Site	5,341	209	1,151	442	2,270	6,124	8,762[a] (± 1,377)	6,774 (± 1,967)
STORAGE				—PERCENT[2]—				
Storage Methods:								
Closed Metal Drums	4	10	29	32	25	32	13	31
Bulk Waste Container	6	9	28	30	13	27	11	26
Piles	4	15	2	3	26	<1	9	1
Pails/Garbage Cans	7	8	5	5	10	5	8	5
Below Ground Tanks	0	0	14	16	5	16	3	16
Generators Storing for ≤ 180 Days	96	96	95	97	97	94	96	95
Average Duration of Storage (Days):								
0 - 7	78	90	40	41	28	35	60	37
8 - 90	18	5	52	56	61	52	34	51
91 - 180	<1	1	3	1	8	8	3	7
>180	4	4	5	3	3	6	4	5
TRANSPORT								
Generators Notifying Transporters	23	37	65	63	90	94	46	90
Notification Methods:								
Labeled Container	11	16	18	13	25	34	16	32
EPA Manifest	<1	2	15	11	23	23	8	22
DOT Shipping Papers	<1	<1	5	3	9	7	3	7
Other	17	30	61	61	80	79	39	76
Transport Methods:								
Contracted Truck	24	15	83	93	78	66	46	66
Public Truck	35	14	7	3	8	12	24	12
Company Truck	30	54	8	2	10	11	22	12
Other	12	17	2	1	7	11	10	10
Destination:								
Solid Waste Landfill	64	38	18	14	31	33	50	32
Recycling Facility	9	38	37	42	42	36	21	36
Subtitle C Landfill	1	2	15	9	14	11	6	11
Solid Waste Incinerator	1	4	25	25	4	4	5	6
Subtitle C Incinerator	<1	2	9	7	12	13	5	13
Do Not Know	24	20	3	3	6	10	17	10

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[1] Estimates based on Small Quantity Generator Survey results.

[2] All percentages apply to either the total number of small quantity generators shipping waste off-site or the total quantity of waste shipped off-site, within each size category.

[a] The unweighted number of respondents shipping ignitable wastes off-site is 232.